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THE

BOTANICAL REGISTER;

OR,

ORNAMENTAL FLOWER-GARDEN

AND SHRUBBERY.

CONSISTING OF

COLOURED FIGURES OF PLANTS AND SHRUBS,

CULTIVATED IN BRITISH GARDENS;

ACCOMPANIED BY THEIR

History, Best Method of Treatment in Cultivation, Propagation, &c.

THE DESIGNS BY

SYDENHAM EDWARDS,

AND OTHERS.

VOL. XIV.

———viret semper———nec fronde caducâ
Carpitur.

LONDON:
JAMES RIDGWAY, 169, PICCADILLY.

M.DCCC.XXVIII.

MISSOURI
BOTANICAL
GARDEN.

LONDON:
J. MOYES, TOOK'S COURT, CHANCERY LANE.

M. Hart. del. Pub. by J. Ridgway 169 Piccadilly March. 1. 1828. J. Watts. sc.

RENANTHERA coccinea.

Scarlet Air-Plant.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDEÆ. § *Vandeæ* Lindl.

RENANTHERA Lour.—*Pollinia* duo posticè biloba; *caudiculâ* medio constrictâ, non elasticâ, *glandulâ* triangulari. *Anthera* terminalis, opercularis, decidua, unilocularis, posticè bivalvis. *Stigma* subrotundum cavum; rostello obtuso. *Columna* aptera, libera, margine anteriore super stigmate inflexo. *Labellum* nanum, sessile, liberum, cum columnâ articulatum, 3-lobum basi saccatum, lobis lateralibus erectis. *Sepala* patentia, subæqualia, basi distincta, unguiculata, spatulata, undulata.——Epiphyta (Chinensis) *caulescens, radicans, ramosa.* Folia *carnosa, avenia.* Flores *magni, paniculati.*

R. coccinea. *Loureiro Flora cochinchinensis* 2. *p.* 521.

Caulis *longus, sæpè* 8-10-*pedalis, radicibus paucis longis, tortuosis, super arbores v. saxa decumbens, teres, foliosus, basi foliorum vestigiis vaginatus, paululum ramosus.* Folia *carnosa, disticha, avenia, plana, apice obliqua, emarginata, atroviridia, sublucida,* 4-5 *uncias longa.* Paniculæ *laterales, laxæ, multifloræ,* 2½ *pedes longæ, ramis teretibus, duris.* Bracteæ *breves, ovatæ, subcorrugatæ.* Ovarium *cum pedunculo brevi continuum, pallidè coccineum,* 6-*sulcatum.* Sepala *patentia, basi libera, non imbricata, carnosa;* 3 superiora *linearia, erecta, intermedio majore spatulato, coccinea, maculis luteis nubilis fasciata;* 2 inferiora 1½ *uncialia superioribus longiora, dependentia, collateralia unguiculata, lanceolata, obtusa, medio abruptè undulata, coccinea, fasciis quibusdam obscuris pallidioribus.* Labellum *nanum,* 3 *lineas tantum longum, saccatum, cum columnâ articulatum, trilobum,* lobis lateralibus *erectis, truncatis, luteis, coccineo marginatis et vittatis,* intermedio *linguæformi, reflexo, coccineo, basi luteo;* sacco *conico, obtuso, intùs luteo, glabro, extùs coccineo punctato, fauce utrinque calloso.* Columna *coccinea, semiteres, labelli longitudine, aptera, anticè lutea vittata, margine anteriore super stigmate inflexo.* Stigma *excavatum, subrotundum.* Anthera *terminalis, opercularis, atrococcinea, obtusa, unilocularis, posticè semibivalvis.* Pollinia *duo, reniformia, posticè biloba,* glandulâ *triangulari,* caudiculâ *diaphanâ vix elasticâ, medio constrictâ.*

The work of the missionary Loureiro, published in 1790, a drawing in the possession of the Horticultural Society of London, and the reports of some travellers who have visited China, have been, up to the present time, the

only evidence to Europeans of the existence of this truly magnificent plant, the beauty of whose blossoms surpasses every thing known in the vegetable world. That the Chinese suspend in baskets from the ceilings of their rooms several of the tribe of plants to which this belongs, some for the sake of their fine flowers, and some on account of their delightful fragrance, is familar to every one. Many, if not all, of this description, have been introduced from time to time; and a few have flowered with us. Among those which bid defiance to the skill of the cultivator, has long been recognised a species, introduced sometime previous to 1817, with long leafy stems, sometimes attaining the height of 8 or 10 feet, and fleshy, veinless leaves; it is frequently imported from China, and is now to be found in almost every collection of which parasitical Orchideæ form a part, attaching itself by means of its long tortuous roots to a damp wall, columns, or other bodies placed as its support. This is Renanthera coccinea.

The cause of previous want of success in inducing it to flower, has resided in its having been cultivated in too dry an atmosphere. Mr. Fairbairn, gardener to His Royal Highness Prince Leopold, at Claremont, impressed with this opinion, tried the effect of tying moss around the stems, and keeping it constantly damp, exposed as much as possible to the influence of the sun. With what success his experiment has been rewarded, appears from the accompanying representation of a portion of a panicle, 2½ feet long, which was finally produced in the Hothouse at Claremont, in October 1827.

To Botanists it has been as little known as to the rest of the world,—almost every systematist having omitted it. And yet the language of Loureiro is far from unsatisfactory, allowance being made for certain peculiarities of diction.

A native of woods in Cochinchina, where it climbs over trees. Propagated without difficulty by cuttings. When in flower, the plant may be safely removed to a dwelling apartment, where the blossoms, which are very durable, will remain in perfection many weeks.

Stem often 8 or 10 feet in length, round, leafy, slightly branched, the lower part sheathed with the persistent

bases of the leaves, pushing forth a few long, tortuous roots, by which it clings to trees or stones. *Leaves* fleshy, distichous, veinless, flat, obliquely emarginate at the apex, dark-green, sublucid, 4-5 inches long. *Panicles* lateral, loose, many-flowered, 2 feet and a half long, with hard, round branches. *Bracteæ* short, ovate, somewhat shrivelled. *Ovarium* continuous with the short peduncle, pale red, with 6 furrows. *Sepals* spreading, distinct at the base, not imbricated, fleshy, the 3 *upper* linear, erect, the middle one being larger and spatulate, scarlet, banded with yellow cloudy spots; the 2 *lower* an inch and half in length, longer than the upper, hanging down, collateral, unguiculate, lanceolate, obtuse, abruptly undulated in the middle, scarlet, with a few obscure paler bands. *Labellum* dwarf, only 3 lines long, bagged, articulated with the column, 3-lobed, the lateral lobes erect, truncate, yellow, bordered and striped with scarlet, the *middle one* tongue-shaped, reflexed, scarlet, yellow at the base; *saccus* conical, obtuse, yellow and smooth inside, scarlet and dotted outside, with the throat callous all round. *Columna* scarlet, half round, the length of the labellum, apterous, striped with yellow in front, its anterior margin incurved over the stigma. *Stigma* hollowed out, roundish. *Anther* terminal, opercular, dark scarlet, obtuse, one-celled, half two-valved at back. *Pollen masses* 2, reniform, two-lobed at back, with a triangular *gland*, and a diaphanous scarcely elastical *caudicule*, contracted in the middle.

J. L.

M. Hart, del. Pub. by J. Ridgway, 169 Piccadilly, Mar. 1, 1828. J. W. sc.

PENTSTEMON diffusum.

Spreading Pentstemon.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. SCROPHULARINEÆ.
PENTSTEMON. *Suprà, vol.* 13. *fol.* 1121.

P. *diffusum;* caule ramoso, foliis ovato-oblongis glabris inæqualiter serratis, pedunculis axillaribus multifloris, calycibus turbinatis: laciniis laceris aristatis. *Douglas Journal ined.*

Radix *perennis, repens.* Caules *decumbentes, radicantes, ramosi,* 1½-2-*pedales, teretes, glabriusculi, purpurei.* Folia *sempervirentia, ovato-oblonga, inæqualiter serrata, glabra, atroviridia; superiora serrata, inferiora in petiolum decurrentia.* Pedunculi *axillares, pubescentes, sæpiùs foliis breviores, apice multiflori.* Bracteæ *pubescentes, ovato-acuminatæ, integræ.* Calyx *turbinatus, pubescens, laciniis patentibus, margine argutè laceris, apice aristatis.* Corolla *purpurea, unciam longa, glabra, labio superiore retuso, inferiore trifido, laciniis rotundatis.* Filamentum *quintum sterile, tubi longitudine, barbatum.* Capsula *ovata, leviter pubescens.*

A beautiful hardy perennial, with evergreen leaves, and decumbent, rooting stems, by which it is readily increased. Native of open grounds and banks of streams in the districts around the mouth of the Columbia River, where it was found abundantly by Mr. Douglas. Our drawing was made at the Garden of the Horticultural Society in 1827.

Grows freely either in common light garden soil or in the American borders, in both which situations it flowers in the utmost profusion from June till its growth is arrested by frost.

Root perennial, creeping. *Stems* decumbent, rooting, branched, 1½ to 2 feet high, round, smoothish, purple. *Leaves* evergreen, ovate-oblong, unequally serrated, smooth, deep green; the upper serrated, the lower decurrent on the petiole. *Peduncles* axillary, pubescent,

generally shorter than the leaves, many-flowered at the apex. *Bracteæ* pubescent, ovate-acuminate, entire. *Calyx* turbinate, pubescent; the segments spreading, finely lacerated at the edge, aristate at the point. *Corolla* purple, an inch long, smooth; the upper lip retuse, the lower trifid, with rounded segments. Fifth filament sterile, the length of the tube, bearded. *Capsule* ovate, slightly pubescent.

J. L.

M. Hart del. Pub by J. Ridgway 169 Piccadilly Mar. 1. 1828. S.W. sc.

BAUHINIA cumanensis.

Cumana Bauhinia.

DIADELPHIA *DECANDRIA.*

Nat. ord. Leguminosæ. § *Cæsalpinieæ.*

BAUHINIA Linn. *Sepala 5,* irregulariter concreta in calycem 5-fidum aut lateraliter fissum membranaceum. *Petala 5,* patula, oblonga, subinæqualia, superiore à cæteris sæpè distante. *Stamina* 10, nunc 9 sterilia monadelpha, decimo libero antherifero, nunc imâ basi monadelpha omnia aut 5 v. 3 fertilia. *Ovarium* pedicellatum longum. *Legumen* 1-loculare 2-valve polyspermum. *Semina* compressa, ovalia, endopleurâ tumidâ. *Embryo* rectus, radiculâ ovatâ, cotyledonibus planis.—Frutices. Folia *biloba, nempè constantia foliolis duobus apici petioli sitis 2-5-nerviis, nunc omninò liberis, nunc omninò concretis, sæpiùs plùs minùs margine interiori nerviformi connatis in sinu aristatis.* Flores *racemosi.* Decand. prodr. 2. p. 512.

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§ *Caulotretus.*

Stamina 10 *omnia fertilia et libera petalis sæpè breviora. Calyx ventricosus 5-dentatus sub-bilobus. Ovarium sessile.—Caules sæpè scandentes compressi. Flores albi aut flavicantes.* Dec. l. c.

B. *cumanensis;* caule sarmentoso, ramulis glabris, foliis basi cordatis subtùs pubescentibus, foliolis membranaceis ovatis subacutis 4-nerviis ad medium concretis, racemis terminalibus solitariis interdùm bifidis vel cirrhiferis. *Dec. l. c.*

B. cumanensis. *Humb. et Kunth. nov. gen.* 6. *p.* 321.

B. scandens Americana. *Linn. sp. ed.* 2. *p.* 535. fide *Candollii.*

Caulis *compressus, scandens, junior subpilosus.* Folia *basi cordata, ad medium v. ultrà biloba, lobis divaricatis, acutis,* 4-*veniis, suprà glabris, subtùs pallidis, pubescentibus.* Racemi *oppositifolii, pauciflori, foliis breviores.* Pedicelli calycesque *rufo-pubescentes.* Petala *alba, erecta, pubescentia, subæqualia, basi rubro punctata.* Stamina 10, *libera, æqualia, fertilia, calyce breviora.* Ovarium *sessile, tomentosum.*

A tender twining stove plant, with handsome foliage and inconspicuous flowers. Native of shady woods in Cumana and other parts of equinoctial America. The seeds from which the plant now represented was raised, were received from Rio Janeiro by the Comte de Vandes, in whose Hothouse at Bayswater the figure was taken, in July last.

Stem compressed, scandent, when young somewhat downy. *Leaves* cordate at the base, two-lobed as far as the middle, or further, with divaricating, acute, 4-veined lobes, smooth above, pale and pubescent beneath. *Racemes* opposite the leaves, few-flowered, shorter than the leaves. *Pedicels* and *calyxes* pubescent, with rufous hairs. *Petals* white, erect, pubescent, nearly equal, dotted with red at the base. *Stamens* 10, distinct, equal, fertile, shorter than the calyx. *Ovarium* sessile, downy.

J. L.

SINNINGIA villosa.

Shaggy Sinningia.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. GESNERIEÆ.
SINNINGIA. *Suprà, vol.* 12. *fol.* 997.

S. *villosa;* caule foliisque villosis, calycibus 5-partitis ovarii longitudine, floribus aggregatis. *Lindley, suprà, fol.* 1112.

Caulis *teres, crassus, carnosus, simplex, 2-pedalis, pallidè viridis, villosus.* Folia *longè petiolata, oblongo-lanceolata, crenata, convexa, villosa, v. quasi strigosa, pallidè viridia.* Flores *aggregati in axillis foliorum, quibus multò breviores, breviter pedunculati.* Calyx *obovatus, villosus, ovarii alati longitudine, corollâ multò brevior.* Corolla *extùs villosa, pallidè viridis, immaculata, circiter duas uncias longa.*

The annexed figure illustrates a species mentioned at fol. 1112 of this work as a fourth kind of Sinningia. It will now be seen that it is totally different from the two species already figured, than which it is twice taller, and altogether less handsome. It is, however, a fine stove plant, flowering abundantly during all the summer, and growing freely in peat and loam. It requires a high temperature, and much atmospheric moisture, to succeed perfectly.

A native of Brazil, whence roots were sent in 1826 to the Horticultural Society by Henry Chamberlayne, Esq. It is increased with much difficulty by cuttings or by leaves.

Stem round, thick, fleshy, simple, 2 feet high, pale green, villous. *Leaves* on long petioles, oblong-lanceolate, crenate, convex, villous, appearing as if strigose, pale green. *Flowers* aggregate in the axillæ of the leaves, than which they are much shorter, on short peduncles. *Calyx* obovate, villous, the length of the winged ovarium, much shorter than the corolla. *Corolla* externally villous, pale green, not dotted, about 2 inches long.

J. L.

PRUNUS candicans.

Snowy Plum.

ICOSANDRIA *MONOGYNIA.*

Nat. ord. Rosaceæ. § *Drupaceæ.*
PRUNUS. Suprà, vol. 2. p. 136.

P. *candicans;* pedunculis brevibus geminis ternisve ramulisque pubescentibus, foliis latè ovatis subtùs candicantibus, stipulis angustissimis dentato-incisis longitudine petiolorum, calycibus campanulatis. *Seringe in Decand. prodr.* 2. 532.

P. candicans. *Willd. enum. suppl. p.* 32. " *Balbis cat. taur.* 1813. *p.* 62."

Folia *mollia, oblonga, simpliciter serrata, subtùs petiolisque pallidis, pubescentibus.* Flores *albi, numerosissimi, in fasciculis multifloris congesti, ramulos undique tegentes.* Pedicelli calycesque *pubescentes; calycis tubus brevis, patens, laciniæ ovatæ, intùs tomentosæ.* Petala *oblonga, unguiculata.* Fructus——

A fine hardy shrub, apparently not exceeding 5 or 6 feet in height. Its native country is unknown. It was first published by Mr. Balbis, in his Catalogue of the Turin Garden, in 1813; and in the same year its name appears in Schlechtendahl's Supplement to Willdenow's Enumeration of the Berlin Garden. We believe that the date of its introduction to this country is 1825, in which year plants were received from Messrs. Baumanns, nurserymen at Bollwiller, in Germany, by the Horticultural Society, in whose Garden the accompanying drawing was made, in May 1826.

This will prove a valuable addition to the hardy shrubs of our country: it is quite hardy, easily cultivated, and in the spring is so laden with white blossoms as to seem a mass of snow amidst the green leaves and rosy flowers of the season. From this circumstance its name has undoubtedly been taken, and not from any peculiar white-

ness of its leaves, as Mr. Seringe appears to suppose; the under side of the leaves is not, indeed, unusually white.

Leaves soft, oblong, simply serrated, beneath, and on the petioles which are pale, pubescent. *Flowers* white, very numerous, heaped in many-flowered fascicles, so as to cover the bearing branches. *Pedicels* and *calyces* pubescent; tube of the calyx short, spreading, segments ovate, downy inside. *Petals* oblong, unguiculate. *Fruit* unknown.

J. L.

Pub by J. Ridgway 169

CASTILLEJA coccinea.

Vermilion-leaved Castilleja.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. Scrophularineæ.
CASTILLEJA. *Suprà, fol.* 925.

C. *coccinea;* annua, foliis oblongo-lanceolatis integris trifidisve pilosis, bracteis pinnatifidis coloratis, calyce tubuloso tomentoso margine dilatato tubo corollæ longiore, fastigio piloso.

C. coccinea. *Spreng. syst.* 2. *p.* 755.

Euchroma coccinea. *Nutt. gen. am.* 2. *p.* 55.

Bartsia coccinea. *L. sp. pl.* 839. *Willd. sp. pl.* 3. *p.* 185. *Pursh. fl. am. sept.* 2. 429.

Pedicularis s. cristæ galli affinis virginiana Ajugæ multifido folio; apicibus coccineo, floribus pallidis in spicam congestis. *Pluk. Alm. t.* 102. *f.* 5.

Horminum, tenui coronopi folio, virginianum. *Moris. hist.* 3. *p.* 395. *s.* 11. *t.* 13. *f.* 28.

Caulis *annuus, decumbens, striatus, pilis longis vestitus.* Folia *oblonga, apice trifida v. integra, pilis longis vestita, trinervia; inferioribus sæpiùs integris.* Bracteæ *oblongo-lanceolatæ, miniatæ, luteæ, albæve, ferè semper pinnatifidæ.* Capsulæ *oblongæ, pubescentes, seminibus cuneatis, reticulatis.*

A pretty hardy annual, native of gravelly soil in various parts of North America. It is very abundant in upland meadows about the river Columbia, where it was found by Mr. Douglas. Seeds were sent by him to the Horticultural Society in 1826; and plants produced by them flowered in the open borders in July and August 1827, at which time the drawing was made.

Increased by seeds, which are produced in small quantities. Should be grown in gravel or peat, and sand, and not in loamy soil.

The plant as represented in the accompanying drawing varies materially from its wild state, in having its lower leaves entire and not trifid; but in other respects it agrees

with the spontaneous specimens. The vermilion colouring of the bracteæ is very beautiful; sometimes it varies to a lively yellow, and even to white.

Stem annual, decumbent, striated, covered with long hairs. *Leaves* oblong, trifid at the end, or entire, covered with long hairs, with three nerves; the lowest often entire. *Bracteæ* oblong, pinnatifid, scarlet, yellow, or white. *Calyx* tubular, with a dilated limb and retuse segments. *Corolla* green, pubescent; its tube shorter than the calyx. *Capsule* roundish, oblong. *Seeds* cuneate, reticulated.

J. L.

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CROTALARIA verrucosa.

Warted Crotalaria.

DIADELPHIA *DECANDRIA.*

Nat. ord. LEGUMINOSÆ. § *Loteæ.*

CROTALARIA L. *Calyx* 5-lobus sub-bilabiatus, labio superiore bi-, inferiore 3-fido. *Corollæ* vexillum cordatum magnum carinâ falcato-acuminatâ. *Filamenta* omnia connexa vaginâ sæpiùs superne fissâ. *Stylus* lateraliter barbato-pubescens. *Legumen* turgidum valvis ventricosis inflatum, sæpiùs polyspermum pedicellatum. —— Herbæ *aut* frutices. Folia *simplicia aut palmatim composita,* 3- *aut rarissimè* 5-*foliolata.* Flores *sæpiùs flavi.* Bracteolæ *minimæ secus pedicellum aut ad basin calycis.* Dec. prodr. 2. 124.

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§ *Foliis simplicibus.*

* *Stipulis non decurrentibus, interdùm nullis, floribus racemosis, racemis terminalibus aut oppositifoliis.* Dec.

C. *verrucosa ;* stipulis lunatis declinatis, foliis ovatis, ramis acutè tetragonis, racemis terminalibus, ovariis villosis. *Dec. l. c. p.* 125.

C. verrucosa. *Linn. sp. pl.* 1005.

C. cærulea. *Jacq. ic. rar. t.* 144.

C. angulosa. *Lam. dict.* 2. *p.* 197. *Cav. ic.* 4. *t.* 321.

Caulis *annuus, quadrangularis, sub-glaber, ramosus.* Folia *simplicia, ovata, apiculata, glabra, petiolis pubescentibus, nunc acuta, nunc obtusa ;* stipulæ *semi-ovatæ, lunatæ, reflexæ.* Racemi *terminales, multiflori, rachi, pedicellis, calycibusque pubescentibus, apice sæpiùs steriles.* Bracteæ *minimæ, subulatæ.* Corolla *cærulea.* Legumen *oblongum, inflatum, pilosum.*

A tender stove annual, native of many parts of the East Indies, and varying extremely in the size and form of its leaves, which are sometimes acute, as in the accompanying figure, sometimes retuse at the apex, and sometimes even hastate. Our drawing was made many years ago, at the Nursery of Mr. Colvill.

Stem erect, succulent, branched, angular, nearly smooth, about 2 feet high. *Leaves* simple, ovate, apiculate, smooth, with pubescent petioles, either acute or obtuse ; *stipules* half-ovate, lunate, reflexed. *Racemes* terminal, many-flowered, with the rachis, pedicels, and calyces pubescent, usually sterile at the top. *Bracteæ* very small, subulate. *Corolla* blue. *Pod* oblong, inflated, pilose.

J. L.

PENTSTEMON pulchellum.

Pretty Pentstemon.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. Scrophularineæ.
PENTSTEMON. *Suprà, vol.* 13. *fol.* 1121.

P. *pulchellum;* caule herbaceo pubescente, foliis sessilibus lineari-oblongis serrulatis glabris, paniculâ simplici secundâ, calycibus pubescentibus, corollis ventricosis subpilosis eglandulosis, palato villoso, filamento quinto barbato, staminibus tubi longitudine.

Caulis *erectus, ramosus,* $1\frac{1}{2}$*-pedalis, leviter pubescens.* Folia *lineari-oblonga, serrulata, glabra, suprema sessilia, subamplexicaulia.* Paniculæ *terminales, simplices, subsecundi, pedunculis sub-bifloris, bracteis longioribus.* Sepala *pubescentia, subglandulosa.* Corolla *violacea v. lilacina, pubescens, eglandulosa, ventricosa, albo venosa, laciniis subæqualibus, palato maculato, villoso.* Stamina *glabra, suprema tubi longitudine, quandoque exserta; filamentum quintum his æquale, apice barbatum.*

A handsome, half-hardy perennial, native of Mexico, whence seeds were brought, in 1826, to Mr. Tate, of Sloane Street, in whose Nursery our drawing was made, in July last, by Mr. R. P. Staples, to whom the same collection owes many other valuable plants. We understand that it throve exceedingly, planted in a warm border exposed to the south.

This is very near P. campanulatum, from which it differs principally in its corolla being paler, more inflated, and destitute of glands, which abound on the corolla of P. campanulatum. The leaves of this plant are also less finely toothed, not so much acuminate, and of a more oblong figure.*

* It is to be observed, that Professor Sprengel's definition of P. campanulatum is so erroneous, that it is to be doubted whether he can possibly have intended the true plant.

Stem erect, branched, a foot and half high, slightly pubescent. *Leaves* linear-oblong, serrulate, smooth, the uppermost sessile, and somewhat amplexicaul. *Panicles* terminal, simple, rather one-sided, with two-flowered peduncles, longer than the bracteæ. *Sepals* pubescent, somewhat glandular. *Corolla* violet or lilac, pubescent, without glands, ventricose, with white veins; segments nearly equal: palate spotted, villous. *Stamens* smooth, the uppermost the length of the tube, and somewhat exserted; sterile filament the same length as these, bearded at the end.

J. L.

DIOSPYRUS Mabola.

The Mabola Tree.

POLYANDRIA *MONOGYNIA.*

Nat. ord. EBENACEÆ.
DIOSPYRUS. *Suprà, fol.* 6. *fol.* 499.

D. *Mabola;* foliis oblongis utrinque acutis subtùs ramulisque sericeis, fasciculis florum racemosis multifloris, corollis dodecandris, antheris didymis.

D. Mabola. *Roxb. Hort. Bengh. p.* 41.

Cavanillea Philippensis. *Desrousseaux in Encyc. méth. suppl.* 3. *p.* 663. *t.* 454.

Frutex *orgyalis, verosimiliter in locis natalibus arbor mediocris, parcè ramosus, vix ramulosus, ligno ferreo.* Rami *patentes, cinerei, pubescentes.* Folia *alterna, oblonga, utrinque acuta, undulata,* 7 *uncias longa,* 3 *lata, atroviridia, subtùs sericea, aurolenta, petiolis crassis, semiteretibus, brevibus.* Flores *dioici, in fasciculis 5-7-floris, racemosis, pedunculatis ordinati, odoratissimi.* Calyx *subrotundus, 4-partitus, sericeus, pedicello bracteis ovatis, sericeis, arctè appressis imbricato.* Corolla *monopetala, suburceolata, ochroleuca, sericea, limbo revoluto quadrifido, laciniis ovatis, contortim imbricatis.* Stamina *hypogyna,* 12, *distincta, tubo breviora, filamentis rigidis, filiformibus, apice furcatis, furcis anticis posticisque utrâque antheriferâ.* Antheræ *connectivo carnoso, subulato, valvis linearibus, lateralibus, septulo medio distincto.* Rudimentum *ovarii villosum.*

This fine plant is the produce of a fruit called Mabola in the Philippine Islands. It is reported to be a middle-sized tree, producing a hard, compact, excessively black, kind of ebony. The fruit is described as covered with a thick, bright brown coat, which encloses a pink or rose-coloured flesh; it is about 4 inches in diameter, and is something like a large quince. Its flavour is said to be agreeable, and its qualities wholesome; the pulp is firm and white, but the blade of a knife colours it black. The tree prefers moist stations, and resists successfully the effects of excessive heat or violent storms. It has been

long cultivated in the Isle of France, whence dried specimens were sent to Lamarck, from which the figure and description in the *Encyclopédie Méthodique* were prepared.

In the stove it attains the height of a man, and is valued for the beauty of its leaves and the fragrance of its flowers, which appear in the ends of the branches, in April. No means having been yet discovered of propagating it, it is one of the rarest plants in our Gardens, two individuals only existing, as far as we know, in this country. Of these, one is, we believe, in His Majetsy's Garden at Kew; the other is in possession of the Horticultural Society, to whom it was brought from China by Mr. John Potts, in 1822. From this latter our drawing was made.

From the Calcutta Catalogue, it appears to have been introduced into the Botanic Garden there, in 1811, by a Monsieur Jannet.

This species is remarkable for the structure of its stamens, which are in number 12, their filaments in all appearance perfectly simple, but their anthers double; that is to say, each filament supports two subulate, 2-celled, perfectly constructed anthers, which do not stand right and left with respect to the axis of fructification, but are placed anteriorly and posteriorly,—a singular arrangement, which deserves attention, but which was not remarked by M. Desrousseaux in the article already alluded to in the French Encyclopædia.

A slightly branched shrub, or small tree, producing scarcely any twigs. The *branches* are spreading, ash-coloured, and pubescent. The *leaves* are alternate, oblong, acute at either end, with an undulated margin; they are about 7 inches long and 3 broad, dark green on the upper surface, and on the lower shew a silky texture and golden lustre; their petioles are thick, half-round, and short. The *flowers* are diœcious, disposed in stalked bundles, each containing 5 or 7, and are very sweet-scented. The *calyx* is roundish, 4-parted, silky, and its footstalk is closely covered by imbricated, silky, closely pressed bracteæ. The *corolla* is monopetalous, somewhat urceolate, pale yellow, silky, with a revolute, 4-cleft limb, the segments

of which are ovate, and imbricated at the base in a twisted manner. The *stamens* are inserted in a single row at the base of the ovarium; in number they are 12, not connected at the bottom, shorter than the tube of the corolla, with rigid, filiform filaments, forked at the apex, each fork bearing a single, subulate, perfect anther. The *ovarium* is imperfect, roundish, and silky.

J. L.

1140

LUPINUS laxiflorus.

Lax-flowered Lupine.

DIADELPHIA *DECANDRIA.*

Nat. ord. Leguminosæ.
LUPINUS. Suprà, vol. 6. fol. 457.

L. *laxiflorus;* perennis, herbaceus, undique pilosus, floribus subalternis ebracteolatis, calycis labio superiore integro basi saccato: inferiore longiore ovato acuminato, carinâ imberbi, vexillo obcordato, foliolis 7-9 lineari-lanceolatis, stipulis minimis subulatis.

L. laxiflorus. *Douglas Journ. ined.*

Caules *cæspitosi, graciles, elongati, pilosi, purpurascentes,* 1-1½-*pedales, basi in spontaneis suffruticosi.* Folia *caulina, densè pilosa,* stipulis *minimis, subulatis,* foliolis 7-9, *lineari-lanceolatis.* Racemi *laxi, pedunculati;* bracteæ *subulatæ, longitudine pedicellorum, deciduæ, pilosissimæ.* Calyces *subalterni, densè pilosi, ebracteolati, labio superiore ovato, basi saccato, abbreviato, inferiore ovato, acuminato.* Vexillum *cæruleum, obcordatum, carinâ imberbi, alisque erubescentibus.*

A small, slender, perennial species, found by Mr. Douglas in dry, open, gravelly plains, about the great rapids of the River Columbia, where it is very common, forming patches of considerable extent, occasionally acquiring a suffruticose habit.

The flowers are blue, mixed with pink, and, although not equal in appearance to some of the larger species, extremely beautiful: they appear in August and September. Our drawing was made in the Garden of the Horticultural Society.

Grows readily in common garden soil: it has not yet produced seeds; but will increase by division of the root

Stems tufted, slender, pilose, purplish, 1-1½ foot long. *Cauline leaves* densely pilose; *stipulæ* subulate, very small; *leaflets* 7-9, linear - lanceolate. *Racemes* lax, stalked;

bracteæ subulate, the length of the pedicels, deciduous, very pilose. *Calyxes* somewhat alternate, densely pilose, without bracteolæ; the upper lip short, ovate, entire, with a sort of bag at its base; the lower ovate, acuminate. *Vexillum* blue, obcordate, with the keel, which is beardless, and the wings pale rose-colour.

J. L.

1141.

SAGITTARIA angustifolia.

Narrow-leaved Sagittaria.

POLYANDRIA *POLYGYNIA*, or MONŒCIA *POLYANDRIA*.

Nat. ord. ALISMACEÆ.

SAGITTARIA L.—*Flores* monœci. *Calyx* trisepalus, abbreviatus, concavus. *Petala* 3, membranacea, plana. ♂; *Stamina* indefinita: *ovaria* nulla. ♀; *Stamina* nulla: *ovaria* indefinita in receptaculo hemispherico imposita. *Stigmata* totidem simplicia. *Pericarpia* rostrata, monosperma, indehiscentia, marginata.——Herbæ *palustres v. natantes* (totius orbis). Folia *sagittata v. rariùs simplicia, petiolo longo lacunoso vaginante.* Scapi *multiflori, lacunosi, verticillis superioribus masculis, inferioribus fœmineis.* Flores *albi.*

S. *angustifolia;* foliis lanceolatis vix costiveniis, scapo gracili subramoso, pedunculis filiformibus subæqualibus petalis multò longioribus; bracteis ovatis acuminatis.

Folia *radicalia, equitantia;* petiolis $1\frac{1}{2}$*-pedalibus, semiteretibus, sursùm attenuatis, in laminâ lanceolatâ, siccâ costiveniâ, crudâ aveniâ, exeuntibus.* Scapus *foliis paulò longior, gracilis, subramosus.* Bracteæ *ovatæ, acuminatæ, pedicellis breviores.* Pedicelli *filiformes.* Flores *inferiores fœminei, superiores masculi.* Sepala *subrotundo-ovata.* Petala *subrotunda, sepalis duplò longiora, multò minora quàm* S. lancifoliæ.

A native of Essequebo, whence its seeds were brought to Mr. Colvill by Mr. E. Davis. A pretty stove aquatic, flowering in October.

This is very near the S. lancifolia of North America and the West Indies, from which it differs in having smaller flowers, and narrower, less distinctly ribbed leaves.

Leaves radical, equitant; *petioles* a foot and half long, half round, tapering upwards, terminating in a lanceolate lamina, which when dried is ribbed, when fresh destitute of veins. *Scape* a little longer than the leaves, slender, slightly branched. *Bracteæ* ovate, acuminate, shorter than the pedicels. *Pedicels* filiform. *Lower flowers* female, upper male. *Sepals* roundish, ovate. *Petals* roundish, twice as long as the sepals, much smaller than in *Sagittaria lancifolia.*

J. L.

1142.

ŒNOTHERA pallida.

Pale-stemmed Œnothera.

OCTANDRIA *MONOGYNIA.*

Nat. ord. ONAGRARIÆ. *§ Capsulares.*
ŒNOTHERA. *Suprà, vol. 2. fol.* 147.

Œ. *pallida;* perennis, glaberrima, caulibus decumbentibus subangulatis, foliis lineari-lanceolatis integerrimis dentatisque, tubo calycis ovarii longitudine, capsulâ lineari-contortâ falcatâ, radice repente.

Herbacea, perennis, radicibus repentibus. Caules *erecti v. decumbentes, sesquipedales, ramosi, pallidi, angulati, glabri.* Folia *linearia, acuminata, integerrima v. dentata, glabra, rarò pinnatifida.* Flores *axillares, erecti, foliis longiores, primùm albi, mox rubescentes, noctu odoratissimi.* Ovarium *lineare, 4-sulcatum, deorsùm incrassatum, glabrum.* Tubus *calycis filiformis, ovarii longitudine.* Calyx *membranaceus, glaberrimus, limbo tubo duplò breviore.* Petala *retusa, denticulata, calyce multò majora.* Stamina *petalis breviora.* Antheræ *longæ, lineares, versatiles, luteæ.* Capsulæ *lineares, falcatæ, contortæ, fibroso-lignosæ, caule inseparabiles nisi vi divulsæ.* Semina *linearia, cuneata, pallidè fusca, basi acuta, superficie lævi.*

A handsome, hardy, creeping-rooted perennial, found by Mr. Douglas in the north-west of North America, where it forms a creeping-rooted straggling plant, about a foot high, growing among sand in all the dry country west of the Rocky Mountains. The flowers are at first white, afterwards they change to pale purple, and at night are deliciously fragrant.

The species of Œnothera are, in many cases, difficult to distinguish from each other; and this difficulty is in no small degree increased by the imperfect manner in which they are often described by authors. We do not, however, conceive that the subject of this article has been before published, although it must be confessed that it bears considerable resemblance to the character given by Nuttall of his *Œ. albicaulis.* But that species is described, firstly, as having the under side of the leaves, and the calyx, slightly

pubescent; secondly, with a stem 3 feet high; thirdly, with the leaves occasionally subserrulate; and, fourthly, as having middle-sized flowers and entire petals. Now in *Œ. pallida*, the leaves and calyx are perfectly destitute of all kind of pubescence, both in the cultivated and spontaneous specimens, the stem never exceeds a foot or foot and half in height, the leaves are never subserrulate, although they are often dentate or slightly pinnatifid, the flowers can scarcely be described as middle-sized, and the petals are the reverse of entire.

From *Œ. pinnatifida* of the same author, it is obviously distinguished by the total absence of pubescence; and the same peculiarity divides it from *Œ. speciosa*, to which it has otherwise a strongly marked affinity, especially in the colour and appearance of its flowers, in its general habit, and creeping roots,—a character far from common in the genus.

From the beautiful *Œ. roseo-alba* of Reichenbach, it is distinguished by the length of the tube of the calyx.

Flowers from June to September. It is increased readily by its creeping roots, and also by seeds, which are produced in small quantities. It flourishes more in peat than in a loamy soil.

Stems erect or decumbent, a foot or foot and half high, branched, pallid, angular, smooth. *Leaves* linear, acuminate, entire or dentate, smooth, rarely pinnatifid. *Flowers* axillary, erect, longer than the leaves, at first white, afterwards pink, emitting a delicious fragrance at night. *Ovarium* linear, with four furrows, incrassated at the base, smooth. *Tube* of the calyx filiform, the length of the ovarium. *Calyx* membranous, quite smooth, its limb not more than half the length of the tube. *Petals* retuse, denticulate, much larger than the calyx. *Stamens* shorter than the petals. *Anthers* long, linear, versatile, yellow. *Capsules* linear, falcate, twisted, between fibrous and woody, inseparable from the stem unless torn off by force. *Seeds* linear, cuneate, pale brown, acute at the base, with a smooth surface.

J. L.

1143

TULIPA Oculus Solis; *var.* Persica.

Persian Sun's Eye Tulip.

HEXANDRIA *MONOGYNIA.*

Nat. ord. LILIACEÆ.
TULIPA. Suprà, vol. 2. fol. 127; *et vol.* 3. *fol.* 204.

T. *Oculus solis;* integumento bulbi intùs lanato, foliis 4 subciliatis caule floreque glaberrimis, labris conniventibus stigmatum villoso-fimbriatis. *Ker, suprà, vol.* 3. *fol.* 204, with the synonyms.

β. *Persica;* foliis latioribus magis glaucis, perianthio maximo, integumento bulbi intùs hirsuto.

We are tempted to figure this variety, not only for the sake of its great beauty and rarity, but also as a form not less remarkable for its large flowers than for its native country, and the peculiarity of the integuments of its roots.

The Agen, or Sun's Eye Tulip, is singular in the genus for a deep black eye, or base to the perianthium in the inside, which is bordered by a margin of yellow interposed between it and the vermilion red of the rest of the perianthium: when expanded beneath the influence of a bright sun, the effect of this is surprisingly beautiful; the flowers rarely open under less favourable circumstances. Hitherto it has been only discovered wild in the south of Europe, about Agen, and the village of Brusquet in Provence. But the variety now represented having been collected by Sir Henry Willoch in Persia, and transmitted to the Horticultural Society, another and less suspicious habitat has been discovered for it. It was received in 1826; and from a plant which flowered in the Chiswick Garden, in March 1827, our drawing was taken.

The roots of the common European kind are densely clothed with wool beneath the outer integuments,—a provision, as it would seem, by which Nature seeks to guard

them from the effect of too severe cold. The Persian variety, which, it is to be presumed, has less need of protection of this kind, has, in lieu of wool, a quantity of coarse hairs, forming a protection much less dense than that which exists in the European kind. May it not hence be suspected, that Persia is indeed the native land of the Tulipa Oculus solis, and that the individuals found in the places above mentioned are mere outcasts of gardens?

This should be cultivated at the foot of a wall with a southern aspect, in a warm border, consisting of light, loamy soil.

M. de Candolle remarks, that T. Oculus solis differs from T. suaveolens and from T. sylvestris, in not having hairs upon either its stem or its flowers; from T. Gesneriana in its pointed petals; and from T. Clusiana in its much larger flower, the claw of which is at least as long as the anthers, and in the arrangement of its colours.

J. L.

M. Hart del. Pub by J. Ridgway 169 Piccadilly Ap 1. 1828 S. Watts sc.

1144

LATHYRUS californicus.

Californian Lathyrus.

DIADELPHIA *DECANDRIA.*

Nat. ord. LEGUMINOSÆ.

LATHYRUS L.—*Calyx* campanulatus, 5-fidus, lobis 2 superioribus brevioribus. *Corolla* papilionacea. *Stamina* diadelpha. *Stylus* complanatus, apice dilatatus, anticè villosus aut pubescens. *Legumen* oblongum, polyspermum, bivalve, 1-loculare. *Semina* globosa aut angulata. —— Herbæ *sæpiùs scandentes.* Stipulæ *semisagittatæ.* Petioli *apice in cirrhum ramosum abeuntes.* Foliola 1-3-*juga.* Pedunculi *axillares.* Decandolle prodr. 2. 369.

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§ 1. *Eulathyrus.*

Vexillum basi edentatum. Foliola opposita vel abortu nulla. Petiolus angustè alatus.

1. *Perennes, pedunculis multifloris.*

** Foliis multijugis.

L. *californicus;* caulibus tetragonis glabris, foliis glaucis 4-5-jugis glabris: foliolis ovato-oblongis mucronulatis, cirrho tripartito, stipulis semisagittatis foliolorum magnitudine, racemis foliis subæqualibus, radice repente.

L. californicus. *Douglas Journal ined.*

Radix *perennis, repens.* Caules *procumbentes, tetragoni, glabri.* Folia *glauca,* 4-5-*juga, racemis subæqualia;* foliolis *ovato-oblongis, mucronulatis, subtùs glabris, subalternis, cirrhis brevibus,* 3-*partitis.* Stipulæ *semisagittatæ, ovatæ, foliolorum magnitudine.* Racemi *multiflori, foliorum longitudine, pedunculo glabro.* Calyces *glabri, laciniis inferioribus elongatis.* Flores *purpurei, eleganter venosi.* Legumen *oblongum, subfalcatum, inflatum.* Semina *fusca, concolora, sphærica, hilo lineari.*

A rambling, strong-growing, creeping-rooted, handsome perennial plant, native of the north-west of North America, where it was found by Mr. Douglas. It is common all over the country, at the outskirts of woods in the subalpine regions of the mountains. With us it flowers during the most of the summer, thriving freely in any soil or situation, but especially in peat among other plants.

It is distinguishable from L. venosus by the large size of its stipulæ, the smaller number of its leaflets, and the greater length of its racemes; and from the Siberian L. pisiformis, by its smaller stipulæ, longer racemes, smooth calyxes, and differently shaped pods. L. myrtifolius, which it is also like, has narrow stipulæ. The L. decaphyllus of Pursh, being, according to Nuttall, the same as Vicia stipulacea of the same author, can have nothing to do with this.

Our drawing was made in the Garden of the Horticultural Society at Chiswick, in September last.

Root perennial, creeping. *Stems* procumbent, angular, smooth. *Leaves* glaucous, of 4 or 5 pair, nearly of the same length as the racemes; *leaflets* ovate-oblong, mucronulate, smooth beneath, somewhat alternate, with short, 3-parted cirrhi. *Stipulæ* semi-sagittate, broadly ovate, as large as the leaflets. *Racemes* many-flowered, the length of the leaves, with a smooth peduncle. *Calyxes* smooth, with the lower segments much elongated. *Flowers* purple, elegantly veined. *Pod* oblong, somewhat falcate, inflated, subpubescent. *Seeds* fuscous, whole-coloured, spherical, with a linear hilum.

J. L.

AGAVE geminiflora.

Twin-flowered Agave.

HEXANDRIA *MONOGYNIA.*

Nat. ord. AMARYLLIDEÆ.

AGAVE L.—*Perianthium* superum, tubulosum infundibulare, carnosum, limbo sexfido, laciniis erectis revolutisve. *Stamina* sex, exserta, summo tubo inserta. *Antheræ* lineares versatiles. *Stylus* simplex. *Stigma* 3-lobum dilatatum carnosum. *Capsula* clausa, trilocularis, polysperma. *Semina* nigra, nitida, plana, disticha.——Plantæ (Americanæ) *caudice simplici,* foliis *imbricatis, carnosis, margine dentatis v. filamentosis;* scapo *terminali,* floribus *herbaceis.*

A. *geminiflora;* foliis linearibus utrinque convexis ancipitibus patentissimis apice spinosis, scapo simplicissimo, floribus sessilibus geminis, staminibus longè exsertis. *Spreng. syst.* 2. 79.

A. geminiflora. *Ker in journal of science, vol.* 2. *p.* 88. *tab.* 1.

Yucca Boscii. " *Desfontaine's cat. hort. par.*"

Buonapartea juncea. *Schlechtendahl suppl. ad enum. hort. ber.*

Littæa geminiflora. " *Tagliabue in Bibl. ital.* 1. 100—111." *Haworth's succulent plants suppl. p.* 38.

Radix *ramosa, paucis onusta radiculis flexuosis, colore obscuro.* Caudex *erectus, teres, lævis, cicatricibus foliorum squamosus.* Folia *obscurè viridia, in orbem ad apicem caudicis congesta, sessilia, ancipitia, basi tantummodo incrassata, farcta, substriata, glabra, flaccida, mucrone osseo (sphacelato) terminata, marginibus per ætatem filamentosis.* Scapus *centralis, simplex, erectus, teres, lævis, substriatus, infernè squamosus, squamis lanceolato-dentatis, supernè multiflorus, floribus in seriem spiralem crebram interruptam dispositis.* Flores *sessiles, geminati, in spicam longissimam digesti, bractea lineari-lanceolata, subciliata, florem subæquante suffulti, ochroleuco viridi-violacei (viridescentes), basi cujusdam floris duabus aliis bracteolis, ovato-acutis, ciliatis, scariosis præditi.* Corolla *(perianthium) tubuloso-campanulata, sexangularis: limbus sexfidus, revolutus, laciniis lanceolatis.* Filamenta *erecta, laciniarum limbi basi inserta, eoque duplò longiora.* Antheræ *versatiles, magnæ, oblongæ; longitudinaliter sulcatæ.* Germen *(ovarium) inferum, ovatum, 6-gonum.* Stylus *erectus, simplex, teres, supernè crassior, corollâ paulò longior.* Stigma *inconspicuum.* Capsula *polysperma, 3-gona.* Semina *duplici serie in singulo loculo, semiorbicularia, plana, nitida, nigra.* Ker. loc. cit.

A native of South America, whence it is supposed to have been introduced to Europe about 1795. In 1815

A. Knighton Drummond.

it flowered for the first time in the Garden of the Duke of Litta, at Lainate, near Milan. That specimen had a caudex 3 feet high, and 7 inches thick; the leaves were 3 feet long; the flower-stem 24 feet high; and the number of flowers one thousand four hundred and eighty-two. The plant from which the annexed drawing was made blossomed in the Nursery of Mr. Joseph Knight, in November 1826: the stem was 14 feet high, and the number of flowers eight hundred and forty-six. In the Gardens both of this country and of the continent, it was, before flowering, confounded with Buonapartea juncea, a totally different plant, resembling this in nothing but the narrowness of its leaves, which are otherwise so different, that no person who possessed the slightest acquaintance with the natural affinities of plants could have fallen into the mistake. But at that time Botany was too often mere empiricism,—a stigma from which it has not yet recovered in this country. The Botanist of artificial arrangements could do nothing without his stamens and styles: but for the student of nature, no better evidence upon this plant than the leaves afford would have been desired, to determine whether or not it was a Buonapartea.

By Signor Tagliabue, who had the care of the Duke of Litta's plant, it was found, that if the central bud of the stem were seared with a hot iron, a brood of young plants would be produced round the base; and accordingly such was the method he practised in propagating it.

With respect to the genus of this plant, we feel ourselves fully justified in adopting the opinion of Mr. Ker, that it is a mere Agave, upon the ground that it possesses no character either of fructification or vegetation, by which it can be essentially distinguished; unless the revolute limb of the perianthium be so considered; upon which, however, little value is to be placed. Indeed, with this exception, it agrees in every particular with the genuine Agaves. With regard to habit, we should have presumed that no one would suppose that rather vague, but sometimes important quality, to depend upon a difference in the breadth of the leaves of two plants; and yet, except in this particular, we know of nothing which can have led

those who insist upon the generic differences of this species to found an argument upon its peculiar habit.

Root branched, with a few flexuose rootlets of a dull colour. *Stem* erect, round, smooth, covered with scales, formed by the scars of the leaves. *Leaves* dull green, clustered in a circle around the top of the stem, sessile, two-edged, a little thickened just at the base, solid, somewhat striated, smooth, flaccid, with a bony sphacelated point, the edges, when the leaves are old, becoming filamentous. *Scape* central, simple, erect, round, smooth, somewhat striated, covered at the base with lanceolate, dentate scales, towards the summit covered with flowers, which have a dense, interrupted, spiral arrangement. *Flowers* sessile, in pairs, arranged in a very long spike, with a linear-lanceolate, somewhat ciliated bractea, nearly as long as the flower, yellowish, with a dingy green cast; at the base of each flower are two other bracteolæ, with an ovate-acute figure, a ciliated margin, and a scariose texture. *Corolla* (perianthium) tubular-campanulate, hexangular, with a six-cleft, revolute limb, and lanceolate segments. *Filaments* erect, inserted into the base of the segments, and twice longer than it. *Anthers* large, versatile, oblong, furrowed lengthwise. *Germen* (ovary) inferior, ovate, with 6 angles. *Style* erect, simple, round, thickened upwards, a little longer than the corolla. *Stigma* inconspicuous. *Capsule* many-seeded, 3-cornered. *Seeds* inserted in a double row, half orbicular, flat, shining, black.

J. L.

POLYGALA oppositifolia; *var.* major.

Large opposite-leaved Polygala.

DIADELPHIA *OCTANDRIA.*

Nat. ord. POLYGALEÆ.

POLYGALA Tourn.—*Calycis* sepala persistentia, 2 interiora alæformia. *Petala* 3-5, tubo stamineo connexa, inferiore carinæformi (forsan è duobus coalitis constante). *Capsula* compressa, elliptica, obovata, v. obcordata. *Stamina* pubescentia, hilo carunculato, comâ destituta. *Dec. prodr.* 1. 321.

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§ Psychanthus. *Carina ampla cristata. Capsula glabra marginata. Bracteæ tres sæpiùs persistentes ad basin pedicellorum.—Frutices Capenses (unicus Arabicus).* Dec.

P. *oppositifolia;* foliis oppositis cordatis acutis, ramis glabris.

α. P. oppositifolia. *Linn. Mant.* 259. *Willd. sp. pl.* 3. 885. *Thunb. prodr.* 120. *Desf. in ann. mus.* 1. 130. *Hort. Kew. ed.* 2. 4. 244. *Suprà, fol.* 636. *Dec. prodr.* 1. 321. *Spreng. syst.* 3. 163.

β. major, foliis distantibus magis cordatis, acuminatis, racemis multifloris, floribus majoribus.

Omninò intermedia inter P. oppositifoliam et cordifoliam, illi glabritate foliorum ramorumque affinior, huic foliorum formâ florumque magnitudine similis, præsertim varietati nomine P. latifoliæ, ad fol. 645 *hujus operis depictæ.*

For this handsome variety of P. oppositifolia we are indebted to the favour of Alexander Baring, Esq., from whose Conservatory at the Grange it was sent by Mr. Peter M'Arthur, his Gardener, in February 1826. It is a beautiful greenhouse plant, easily increased, and blossoming in abundance in the early months of the year,—a season when few flowers are to be procured.

It is sometimes called in Gardens by the name of P. cordifolia, a different plant, distinguished by the downiness of its leaves and branches. The present is altogether intermediate between that species and P. oppositifolia,—differing, indeed, in little, except its smoothness, from P. latifolia of fol. 645 of this work, which is a mere variety

of P. cordifolia, as is noted by Professor Sprengel: but which is not referred to by M. Decandolle, who quotes no figure as existing of P. cordifolia, although it has been long since represented in the *Botanical Magazine*, under the false name of P. oppositifolia.

J. L.

1147

EULOPHIA ensata.

Sword-leaved Eulophia.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDEÆ. § Vandeæ *Lindl.*
EULOPHIA. *Suprà, vol.* 12. *fol.* 1002.

E. *ensata;* foliis strictis ensiformibus plicatis, scapo radicali vaginato, racemo capitato, labelli lobo medio linguiformi barbato, calcare recto conico abbreviato, bracteis membranaceis venosis.

Radix *tuberosus, semisubterraneus, subrotundus, depressus, cicatrizatus.* Caules *simplices, stricti, pedales, foliis ensiformibus, strictis, plicatis, Bletiæ more provenientibus.* Scapus *radicalis, pedalis, vaginatus, supernè nudus, vaginis bracteisque membranaceis venosis: his ovario longioribus.* Flores *lutei, ferè unciam longi, in racemo arcto subcapitato glomerati.* Perianthium *patens.* Sepala 3 exteriora *basi imbricata, ovali-lanceolata, æqualia: lateralibus anticè cordatis, margine anteriore labello supposito;* 2 interiora *minora, conformia.* Labellum *anticum, oblongum, calcaratum, cucullatum, trilobum, lobis lateralibus abbreviatis, obtusis, glabris, intermedio linguiformi disco barbato, calcare brevi, recto, conico, retuso.* Columna *labello multò brevior, calcare paulò longior, semiteres, marginata.* Stigma *transversum, excavatum.* Anthera *terminalis, opercularis, decidua, emarginata, bilocularis, septuli rudimento nullo.* Pollinia 2, *altè sulcata, ceracea, caudiculâ brevi, glandulâ transversâ.*

We received this plant, in July 1827, from Mr. Tate, of the Sloane Street Nursery, as a native of the Cape of Good Hope. We believe, however, that it is peculiar to the colony of Sierra Leone, where roots were originally found by Mr. George Don, and by him transmitted to the Horticultural Society in 1822. It is a tender stove plant, extremely difficult to cultivate, being liable to rot from various causes. In growth it resembles the West Indian Bletias, like them dying down to the ground periodically.

Root tuberous, semi-subterraneous, roundish, depressed, covered with scars. *Stems* simple, straight, a foot high, with ensiform, straight, plaited leaves. *Scape* from the

root, about a foot high, sheathed, at the upper end naked, the sheaths and bracteæ membranous and veiny; the latter longer than the ovarium. *Flowers* yellow, about an inch long, crowded in a close capitate raceme. *Perianthium* spreading. The three *external sepals* imbricating at the base, oval-lanceolate, equal; the lateral cordate in front, with their anterior margin placed underneath the labellum; the *two inner* smaller, but of the same figure. *Labellum* anterior, oblong, calcarate, cucullate, 3-lobed, the lateral lobes short, obtuse, smooth, the middle one tongue-shaped, with a bearded disk; spur short, straight, conical, retuse. *Column* much shorter than the labellum, rather longer than the spur, half round, margined. *Stigma* transverse, excavated. *Anther* terminal, opercular, deciduous, emarginate, 2-celled, with no rudiment of a dissepiment. *Pollen masses* 2, deeply furrowed, waxy, with a short caudicula and a transverse gland.

J. L.

Note upon *Sophronia modesta*, fol. 1129.

At the time this article was written, we had not received the Botanical Division of Captain Freycinet's Voyage, in which there is a genus of Fungi named Sophronia. This being the case, it is necessary, in order to avoid confusion, that we should alter our name; our readers are therefore requested to substitute *Sophronitis* for *Sophronia*.

1148

Watt.

AMARYLLIS intermedia.

Intermediate Amaryllis.

HEXANDRIA *MONOGYNIA.*

Nat. ord. AMARYLLIDEÆ.
AMARYLLIS. *Suprà, vol.* 1. *fol.* 23.

A. *intermedia;* spatha triflora pedunculis longiore, perianthii laciniis lineari-oblongis æqualibus, foliis linearibus obtusis.

Scapus *pedalis, teres.* Folia *scapo breviora, linearia, atroviridia, lævia.* Flores *atro-rubri, subinterruptè fasciati, magnitudine omninò intermedii inter A. rutilam et advenam.*

A native of Brazil, whence roots were sent to the Horticultural Society by Sir Henry Chamberlaine, in 1827. It flowered in a stove in the Chiswick Garden in January 1828, when our drawing was made.

Intermediate between some of the larger-flowered species, A. rutila for example, and the rare A. advena, from both of which it is distinguished by the size of the flowers.

J. L.

1149

M. Hart del.   Pub by

LUPINUS lepidus.

Lively Lupine.

DIADELPHIA *DECANDRIA.*

Nat. ord. LEGUMINOSÆ.
LUPINUS. Suprà, vol. 6. fol. 457.

L. *lepidus;* herbaceus, perennis, floribus alternis pedicellatis ebracteolatis, calycis villosi labio superiore bipartito inferiore acuminato elongato, foliolis 5-7 lanceolatis utrinque sericeis, caule florido erecto subunifolio.
L. lepidus. *Douglas Journal ined.*

Radix *perennis.* Folia *longè petiolata;* petiolis *teretibus,* 4-6 *uncias longis, sericeis;* foliolis 5, 6, 7, *lanceolatis, in basin acuminatis, uncialibus v. sesquiuncialibus, utrinque villis longis sericeis, sæpè in vetustate suprà glabriusculis;* stipulis *subulatis, falcatis.* Caulis *teres, sericeus,* floridus 1-2-*phyllus, erectus, palmaris,* fructifer *elongatus, debilior, foliis pluribus.* Flores *in racemo stricto, subcylindraceo,* 3-4 *uncias longo dispositi, alterni, ebracteolati, v. processu minimo subulato bracteolæ loco.* Bracteæ *subulatæ, villosæ, calycis longitudine.* Calyx *densè sericeus.* Vexillum *intùs purpureo-cæruleum, maculâ baseos albâ, extùs pallidum;* alæ *oblongæ, ascendentes, purpureo-cæruleæ;* carina *abruptè falcata, apice atro-purpurea, margine superiore lanato.* Semina *parva, alba.*

Another fine perennial Lupine, produced from the inexhaustible store of novelties discovered in North-west America by Mr. Douglas. It is a very local species, growing from Fort Vancouver to the Great Falls of the Columbia, on the dry, elevated banks of streams.

This flowers in August and September, and is the smallest of the North American species, except L. aridus and minimus, not exceeding 6 or 9 inches in height. It is to be propagated, we presume, by dividing the roots: no seed has yet been produced.

Our drawing was made in the Garden of the Horticultural Society, in September last.

Root perennial. *Leaves* on long stalks; *petioles* round,

from 4 to 6 inches long, silky; leaflets 5, 6, 7, lanceolate, acuminate to the base, an inch or an inch and half long, silky on each side, with long white hairs, often becoming nearly smooth on the upper surface when old; *stipules* subulate, falcate. *Stem* round, silky, when *in flower* one or two-leaved, erect, about a span high; when *in fruit* longer and weaker, with more leaves. *Flowers* in an erect raceme, which is nearly cylindrical, and from 3 to 4 inches long, alternate, without bracteolæ, or at least with nothing more than a fine subulate process, which is sometimes present. *Bracteæ* subulate, villous, the length of the calyx. *Calyx* densely silky. *Vexillum* purplish blue inside, with a white spot at the base, outside paler; *alæ* oblong, ascending, purplish blue; *carina* abruptly falcate, dark purple at the apex, woolly on the upper edge. *Seeds* small, white.

J. L.

GENISTA procumbens.

Procumbent Genista.

DIADELPHIA *DECANDRIA.*

Nat. ord. LEGUMINOSÆ.

GENISTA L.—*Calyx* bilabiatus, labio superiore bipartito inferiore 3-dentato, aut 5-lobus, lobis tribus inferioribus ad apicem ferè coalitis. *Vexillum* oblongo-ovale. *Carina* oblonga, recta, genitalia non omninò continens. *Stamina* monadelpha. *Legumen* plano-compressum, aut rariùs subturgidum, polyspermum, rariùs oligospermum, eglandulosum.—— Frutices *floribus flavis.* Dec. prodr. 2. 145.

G. *procumbens;* ramis procumbentibus teretibus striatis subpubescentibus, foliis lanceolatis acutis subtùs calycibusque pubescentibus, floribus pedicellatis axillaribus ternis, corollis glabris. *Dec. l. c. p.* 152.

G. procumbens. *Willd. sp. pl.* 3. 940. *Waldst. et Kit. pl. Hung. t.* 180. *Schult. œstr. fl.* 2. 313. *Sadler fl. Pest.* 2. 175.

Caules *procumbentes, pedales v. sesquipedales, suffruticosi, sulcati, leviter pubescentes.* Folia *simplicia, lanceolata, acuta, subtùs sericea, suprà glabra, sæpiùs alterna, nunc etiam fasciculata.* Flores *versùs fastigium ramorum, odorati, lutei, axillares, bi- v. ternati, pedicellati, foliis floralibus longiores.* Calyx *et* pedicelli *sericei.* Corolla *glaberrima, vexillo cæteris paulò breviore.*

A rare and pretty little hardy shrub, well adapted for covering rock-work, over which its stems trail in dense masses. Its flowers are very fragrant.

The accompanying drawing was made many years since, and we have unfortunately no memorandum as to whence it was procured. If it should have been furnished by any reader of this work, we shall be glad to be informed, in order that the collection may be referred to in which it is to be procured.

A native of various parts of Hungary and Moravia, where it was discovered by Waldstein and Kitaibel. By our friend Dr. Sadler, it was found growing on limestone

rocks in woods beyond the Kammerwald, near the stone quarry of Torbágy; and also in similar places on the Schwabenberg, all in the neighbourhood of Pest, where it flowers in June and July. We have it from mountains near Agria.

The pods, which were unknown to M. de Candolle, are described by Dr. Sadler, in his excellent Flora of the district of Pest, as "slightly compressed, round at the base, and hoary, with reniform, shining seeds."

Stems procumbent, a foot or foot and half high, suffruticose, furrowed, slightly pubescent. *Leaves* simple, lanceolate, acute, beneath silky, above smooth, usually alternate, occasionally fastigiate. *Flowers* towards the ends of the branches, fragrant, yellow, axillary, in twos or threes, pedicellate, longer than the floral leaves. *Calyx* and *pedicels* silky. *Corolla* quite smooth, with the vexillum rather shorter than the other petals.

J. L.

1151

CRATÆGUS cordata.

Heart-leaved Cratægus.

ICOSANDRIA *DI-PENTAGYNIA.*

Nat. ord. ROSACEÆ. § *Pomaceæ.*
CRATÆGUS. *Suprà, vol.* 13. *fol.* 1128.

C. *cordata;* foliis cordato-ovatis inciso-angulatis glabris, petiolis calycibusque eglandulosis, floribus pentagynis. *Dec. prodr.* 2. 628.
C. cordata. *Hort. Kew. ed.* 1. 2. 168. *Willd. arb.* 82.; *sp. pl.* 2. 1000.
C. populifolia. *Walt. fl. Carol.* 147. *Pursh. fl. Am. sept.* 1. 337.
Mespilus acerifolia. *Poiret dict.* 4. *p.* 442.
Mespilus phænopyrum. *Linn. suppl.* 254. *Ehr. beitr.* 2. 67.
Mespilus cordata. *Miller dict. ic.* 119. *tab.* 179. *Wats. Dendr. Brit. t.* 63.

Arbor *mediocris, ramulis subangulatis, verrucosis.* Folia *cordata, basi subtruncata, acuminata, lobata, serrata, utrinque lævia, suprà lucida, atroviridia, petiolis longis, lævibus.* Flores *albi, corymbosi, parvi, calycibus glabris, petalis rotundatis, apice denticulatis.* Styli 5. Fructus *sphærici, pisiformes, coccinei, carnosi, nuculis quinque osseis.*

This handsome hardy tree is a native, according to Pursh, of hedge-rows and banks of rivers, from Canada to Virginia. With us it forms a beautiful bush or small tree, flowering rather later than others of the genus, the blossoms beginning to open in the end of May, or early in June. It is much valued for the fine dark green, glossy appearance of its leaves, and the vivid colour of its scarlet fruit, which will sometimes hang on the tree during the winter.

The specimen from which our drawing was taken was communicated by Mrs. Marryat, from her Garden at Wimbledon.

Young branches rather angular, and warty. *Leaves* cordate, somewhat truncate at the base, acuminate, lobed, serrated, smooth on each side, above dark green and

shining, with long, smooth petioles. *Flowers* white, corymbose, small, with smooth calyxes and roundish petals, denticulate at the apex. *Styles* 5. *Fruit* spherical, pisiform, scarlet, fleshy, with 5 bony nucules.

J. L.

1152

1152

CALOCHÓRTUS* macrocárpus.

Long-fruited Calochortus.

HEXANDRIA *TRIGYNIA.*

Nat. ord. Liliaceæ.

CALOCHORTUS Ph. — *Calyx* 3-phyllus, herbaceus. *Petala* 3, colorata, majora, intùs barbata, suprà unguem canaliculatum pulvinata. *Ovarium* superum, 3-loculare, polyspermum ; *ovula* disticha horizontalia; *stigmata* petaloidea, complicata. *Capsula* apice trivalvis, septicidò dehiscens, nunc obtusè trigona oblonga rostrata, nunc triquetra subrotunda. *Semina* plana, serie simplici inserta, testâ membranaceâ. —— Herbæ *bulbosæ* (Americæ septentrionalis temperatæ), foliis *ensiformibus, vaginantibus.* Caules *simplices.* Flores *umbellati v. racemosi, purpurei albidive.*

C. *macrocarpus;* caule 3-5-phyllo bifloro, petalis præter fasciculum pilorum glabris, capsulis erectis lineari-oblongis. *Douglas in Hort. Trans. vol. 7. p. 276. tab. 8.*

Bulbi *elongati, tunicis atrobrunneis, separabilibus.* Caules 2-3-*flori,* 1½-2-*pedales, erecti, versùs fastigium flexuosi, striati, glauci.* Folia 3-5, *ensiformia, convoluta, basi vaginantia, apice sæpè sphacelata, striata, glauca, caule breviora.* Flores 2, *terminales, basi bibracteati, bracteis foliaceis.* Pedunculi *apice incrassati, cum caule continui, nec articulati.* Perianthium *campanulato-patens, deciduum, æstivatione convolutivâ.* Sepala *tria, ovato-lanceolata, acuminatissima, apice sphacelata, margine membranacea, petalis longiora, extùs viridia, striata, intùs amænè purpurea, maculâ ad basin ocellatâ obscurâ.* Petala *cuneato-obovata, plana, apiculata, amænè atro-purpurea, dorso extùs striâ viridi, intùs versùs basin pallidiora, processubus luteis filamentosis barbata, in medio quorum areola adest cordata, pulvinata, pilis brevibus albis apice purpureis densissimè confertis supertecta.* —— Obs. *Barba capillamentis constat tortuosis corrugatis, apice clavatis, sæpè bifidis luteis fistulosis succo luteo repletis, è cellulis constantibus minutissimis extùs gibbosis, unde superficies sub lente videtur aspera.* Stamina 6, *hypogyna, petalis breviora :* filamenta *linearia, plana, acuminata, erecta, dimidium ovarii longitudinem paululum superantia ;* antheræ *erecto-patentes, filamentorum longitudine, lineares, innatæ, longitudinaliter à latere dehiscentes ;* pollen *fusco-purpureum, omnium maximum, oblongum, cohærens, sub aquâ spontè dehiscens, et fovillam satis*

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* *Calochortus* is derived from καλὸς, handsome, and χόρτος, a kind of grass, in reference to the beautiful flowers borne by the grassy herbage of the genus. *Macrocarpus* signifies literally long-fruited, from μακρὸς, long, and καρπὸς, fruit : the fruit of the other species is short, and roundish.

magnam effundens. Ovarium *lineare, pallidum, triquetrum, angulis obtusis, 3-loculare, polyspermum; ovula disticha, horizontalia, subcompressa, carnosa, canali magno (rapheos initio) laterali, intùs respiciente, et foramine conspicuo contermino.* Styli 3, *breves.* Stigmata *totidem, cordata, æstivatione explicata, mox complicata, recurva, pallidè rosea, sepalis opposita.* Capsula 3 *uncias longa, erecta, lineari-oblonga, chartacea, apice 3-valvis, per septa dehiscens, valvis apice bifidis.* Semina *plana, ovalia, serie simplici inserta, horizontalia; testa laxa cellulosa, quâ amotâ raphe conspicitur tenuis filiformis in chalazam terminans coriaceam.* Embryo *rectus, teres, excentricus.*

This fine plant has been described by Mr. Douglas, with two other species, in the Transactions of the Horticultural Society, from which we learn that it is a native of "the undulating, dry, barren grounds around the Great Falls of the Columbia River, and on the summit of the low hills between them and the Grand Rapids, 200 miles from the ocean." It was also observed "on the banks of the southern branches of the Columbia, towards their sources in the mountains, growing luxuriantly in similar soils."

Our drawing was made in the Garden of the Horticultural Society, in July 1827, where roots sent home by Mr. Douglas, in 1826, flowered in a shady American border. It is at present extremely rare, the two or three roots originally received being all that yet exist in Europe. It is quite hardy, and will, no doubt, be at some distant period as well known in our Gardens as the once equally rare Tigridia Pavonia.

The *stem* grows from a foot and half to two feet in height. The *leaves* are very glaucous, as is also the stem. The *flowers* are a rich deep purple, beautifully bearded at the base, and remain in perfection several days.

J. L.

Ridgway 169 Piccadilly June 1. 1828.

BRUNSVÍGIA* ciliáris.

Ciliate-leaved Brunsvigia.

HEXANDRIA *MONOGYNIA.*

Nat. ord. AMARYLLIDEÆ.
BRUNSVIGIA. *Suprà, vol.* 3. *fol.* 192.

B. *ciliaris;* foliis ciliatis, perianthii laciniis æqualibus patentibus, spathâ multiflorâ.
Lilium africanum sphæricum, floribus obsoletè puniceis minoribus. *Herm. lugdb.* 357.
Bulbus oblongus æthiopicus, foliis guttatis et cilii instar pilosis. *Breyn. cent. t.* 39.
Amaryllis ciliaris. *Linn. sp. pl.* 422.
Amaryllis guttata. *Syst. veg. ed.* 13. *p.* 265.
Hæmanthus ciliaris; foliis oblongis ciliatis, corollæ laciniis reflexis. *Thunb. prodr.* 59.
H. ciliaris. *Ait. Kew. ed.* 1. *vol.* 1. *p.* 404. *Willd. sp. pl.* 2. 96. *Jacq. fragm. tab.* 41. *fig.* 1. *Spreng. syst. vol.* 2. *p.* 56.
Brunsvigia ciliaris. *Ker, suprà, fol.* 193 *in notâ.*
Boophane ciliaris. *Herbert's treatise, p.* 18.

Folia *ovato-oblonga, patentia, longis ciliis fimbriata, utrinque glabra, subtùs maculis sanguineis guttata.* Scapus *palmaris.* Spatha *triphylla, brevis, reflexa, circiter 60-flora.* Umbella *hemisphærica.* Pedunculi *recti, rigidi, triquetri,* 4 *v.* 5 *uncias longi, à latâ basi sursùm ad ovarium attenuata.* Perianthium *hypocrateriforme, tubo brevi recto, medio paululum constricto; limbo regulari, patente, demùm reflexo, laciniis purpureis, unguiculatis, tubo longioribus.* Stamina *æqualia, patentia, basibus connatis, speciem disci ad faucem tubi formantibus.* Ovarium *inflatum, utriculatum, 3-loculare; loculis 2-3 spermis; ovulis medio axi basibus suis acuminatis affixis ascendentibus.* Capsula *chartacea, oblonga, oligosperma; maturam non vidi.*

This plant, although very common in collections, and cultivated in England for at least seventy years, produces

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* *Brunsvigia* was so named in 1753 by Heister, in compliment to his patron, Charles, Duke of Brunswick Lunenburg. What were his Serene Highness's claims to this honour, we know not; but we hope all Englishmen will always have reason to hail the name of Brunswick wherever it appears: and the genus in question, long confounded with Amaryllis, being now restored, the name of Brunsvigia appears with peculiar propriety in the Royal Garden of England.—*Smith in Rees' Cycl. Suppl.*

its flowers so seldom, that there are few persons who have seen them. Even Mr. Herbert, to whom every thing relating to this tribe of plants is familiar, appears to know its blossoms only from a specimen in Mr. Lambert's Herbarium.

The subject from which this figure was taken, flowered in the Conservatory of J. H. Slater, Esq., of Newick Park, near Uckfield, in 1825.

A native of the Cape of Good Hope. Mr. Herbert recommends it to be grown in a moderately light loam, the neck of the bulb being kept above ground, and a little sharp white sand placed in contact with the bulb. In the autumn the leaves appear; the roots should at that time be well watered, and removed to a hothouse, where they ought to remain as long as they continue to grow. Afterwards they should be kept quite dry, but not too hot.

Leaves ovate-oblong, varying in size, spreading, fringed with long ciliæ, smooth on each side, covered with little blood-red gouts on the under side. *Scape* about 6 inches high. *Umbel* consisting of from 50 to 60 flowers, which are of a dull purple, and seated on long, rigid, 3-quetrous peduncles. *Ovules* in each cell 2 or 3, attached to the middle of the axis by their taper bases, and having an ascending direction.

J. L.

1154

PÝRUS* grandifólia.

Large-leaved Pyrus.

ICOSANDRIA *DI-PENTAGYNIA.*

Nat. ord. Rosaceæ. *Pomaceæ.*
PYRUS. Suprà, vol. 6. fol. 514.

Sect. *Aronia* Nob. (Adenorachis *Decand. prodr.* 2. 627.)

P. *grandifolia;* caule erecto ramisque glabriusculis, foliis oblongis obovatisve acutis glabris, fructibus sphæricis calycibusque glabris, corymbis oligocarpis coarctatis, disco villoso. *Lindley in Hort. Trans. vol.* 7, *p.* 233.

Frutex 4-5-*pedalis.* Rami *erecti, fortes, fusci, leviter pubescentes.* Folia *magna, atroviridia, lata, oblonga v. obovata, abruptè acuminata, utrinque glabra, serrulata, suprà glabra, glandulis costæ paucissimis.* Flores, *pro sectione, majusculi.* Calyces *glaberrimi.* Discus *et ovarii apex villosi.* Fructus *atropurpurei.*

A very handsome hardy shrub, resembling Pyrus Chamæmespilus in the general appearance of its foliage, but far more beautiful than that species. It belongs to the tribe of Pyruses, of which P. arbutifolia is the representative, and is the most valuable of all the species of that division which have lately been described. It grows to the height of 4 or 5 feet, and is quite hardy, expanding its blossoms about the middle of May. Propagated by grafting or budding upon the Whitethorn, or any similar stock.

Our drawing was made in the Garden of the Horticultural Society, from a plant that had been received from

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* Pyrus is by the lexicographers derived from ἀπιὸς, the Greek name of the pear; the α at the beginning being omitted by apocope, and an *r* inserted in the middle. But De Theis, with much more plausibility, traces it to *peren*, the Celtic name of the pear; whence he says the Latins formed *pyrus*, the French *poire*, the Anglo-Saxons *pere*, and the English *pear*.

Mr. Miller, of Bristol. A native of North America; but not noticed by any Botanists of that country.

Stem erect, vigorous. *Branches* brown, slightly pubescent. *Leaves* large, bright green, broad, oblong or obovate, abruptly acuminate, smooth on each side, shining above, serrulate, with few glands. *Flowers* larger than usual. *Fruit* dark purple. *Calyxes* quite smooth. *Disk* and apex of the ovarium villous.

J. L.

ORCHIS* papilionácea.

Purple Butterfly Orchis.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDEÆ. § Ophrydeæ *Lindley.*

* Labello radicibusque indivisis.

O. *papilionacea ;* labello obovato subemarginato crenulato venoso, sepalis obtusiusculis erectis nervosis, germine cornu inflexum acutum superante, bracteis coloratis breviore. *Sprengel syst.* 3. 684.

O. papilionacea. *Linn. sp. pl.* 1331. *Scop. carn. n.* 1103. *Willd. sp. pl.* 4. 24. aliorumque.

O. rubra. *Jacquin ic. rar.* 1. *t.* 183. *Collect.* 1. *p.* 60.

Radices *carnosi, indivisi.* Folia *brevia, oblongo-ensiformia, patentia, obtusa.* Caulis *erectus, pedalis v. minor, vaginis submembranaceis venosis, apice virescentibus.* Spica 5-7-*flora.* Bracteæ *membranaceæ, dilatatæ, roseæ, venosæ, ovario longiores.* Sepala *rubro-purpurea, venosa, ascendentia, inferioribus retrorsùm subfalcatis.* Labellum *pallidè purpureum, oblongum, obtusum, indivisum, subundulatum, crenulatum.* Calcar *crassum, conicum, rectum, subacutum, ovario brevius.*

A half-hardy species, introduced into this country by M. Mauri, by whom it was sent from Rome to the Horticultural Society, in 1826: our drawing was made in the Chiswick Garden, in May 1827. It thrives very well in light soil, if planted in a pot, and kept in a frame during the winter; but it would not bear our climate with less attention.

A native of most parts of the South of Europe, in Corsica, Liguria, near Monte Nuovo, Rome, and Naples, and also in Barbary.

By most authors, the O. rubra of Jacquin is considered

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* Orchis is a primitive Greek word, which, being interpreted, signifies a small oval fleshy body; and was applied to the plants that bear its name, in consequence of the figure of the roots according with that interpretation.

identical with O. papilionacea; Sprengel asserts, that the figure in the Icones is a mere error, arising from its having been copied from a wretched drawing. But M. de Candolle, in his *Flore Française*, entertains a different opinion, and distinguishes O. rubra, that is to say, the Piedmontese plant described by Allioni under that name, by its smaller labellum, which is very slightly crenulated, and neither truncate nor emarginate at its apex. We have specimens called O. rubra from Granddidier's Herbarium, which answer to this statement; but they are otherwise so similar to our O. papilionacea from Naples, that we do not think it advisable to distinguish them even as varieties.

Roots fleshy, undivided. *Leaves* short, oblong-ensiform, spreading, obtuse. *Stem* erect, a foot high, or something less, with membranous venous sheaths, which are greenish at the apex. *Spike* 5-7-flowered. *Bracteæ* membranous, dilated, pink, venous, longer than the ovarium. *Sepals* reddish purple, venous, ascending; the lower ones somewhat falcate backwards. *Labellum* pale purple, oblong, obtuse, undivided, somewhat undulated, crenulate; *spur* thick, conical, straight, somewhat acute, shorter than the ovarium.

J. L.

J Watts de

ELÆÁGNUS* angustifólia.

Narrow-leaved Elæagnus.

TETRANDRIA *MONOGYNIA.*

Nat. ord. Elæagneæ.

ELÆAGNUS L.—*Flores* hermaphroditi aut polygami. *Calyx* basi tubulosus; limbo campanulato, 4-5-fido, regulari. *Stamina* 4-5, laciniis calycis alternantia. *Discus* prominens, bipartitus aut annularis. *Nux* calycis tubo incrassato carnoso intùs osseo apice umbilicato et akenio obovoideo constans.——Arbores, foliis *alternis,* floribus *in axillis foliorum pedicellatis.* Ach. Richard. Monogr. p. 26.

E. *angustifolia;* foliis lanceolatis utrinque argenteo-lepidotis.
E. angustifolia. *Linn. sp. pl. ed. Willd.* 1. 688. *Pallas fl. ross.* 1. *p.* 10. *t.* 4. aliorumque.
E. inermis. *Mill. dict. n.* 2.
E. argenteus. *Mænch. méth. p.* 638.
E. orientalis. *Delile, according to A. Rich, but not of Linn.*
E. hortensis *α. Bieb. taur. cauc.* 1. 113.
β. ramis spinosis, foliis ellipticis.
E. spinosa. *Linn. sp. Willd.* 1. 689.
E. hortensis *δ. Bieb. taur. cauc.* 1. 113.

A small, hardy, cinereous tree, growing from 15 to 20 feet high, with the habit of some kind of Willow. Its flowers, which are produced in great quantities in the

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* The ἐλαιάγνος of Theophrastus was a plant with hoary leaves, growing in marshy places in Arcadia, and was probably a species of Willow, although certainly not Salix babylonica, as Sprengel states. It was named from its resemblance to the ἐλαία, or olive, from which it differed in not bearing fruit. The plants to which the name is now applied are also something like the olive. The French call the Elæagnus *chalef;* a slight alteration, according to Golius, of *khaléf,* the Arabic name of the willow; but more probably of *kalaf,* the Persian name of the tree itself.

It is proper to observe, that Dioscorides writes Elæagrus, which means the wild olive;—a reading that has been adopted by some Botanists, and which is most likely the true one.

month of May, are so powerfully fragrant as to perfume all the air around them: it is for this valuable property that the tree is chiefly cultivated. Its reddish brown fruit, which is something like a small date, is only eaten by birds.

There are in the Gardens of a few individuals near London some plants, said to produce an excellent fruit, which have been raised from seed sent from Persia, under the name of *Zinzeyd.* These are the *Elæagnus orientalis,* which Bieberstein considers a mere garden variety of the species now figured. Its fruit is doubtless very good; and the flowers are reported to be even more odoriferous than those of E. angustifolia.

This is a native of Egypt and the eastern parts of Europe, commencing with Bohemia, — whence the French, who esteem it much, call it the Olivier de Bohême, — and extending far into Persia and Siberia. It is very common in the Caucasus, and in Circassia, especially about Kisljar and the banks of the Terek: it is generally used for hedges, for which it is said to be well adapted. According to Pallas, it is most abundant in wet places, among sand hills, in the vicinity of the Caspian and the Volga, especially in the neighbourhood of the wells of the nomadic inhabitants: it is not seen further north than 49°. By the Kirgise Tartars it is called *Dshigde;* by the Calmucs, *Segdé;* by the Russians of the Terek, *Lôch:* it is also sometimes named the *Jerusalem Willow.*

Our drawing was made in the Garden of the Horticultural Society at Chiswick, in May 1827.

J. L.

1157

TILLANDSIA* acaulis.

Stemless Tillandsia.

HEXANDRIA *MONOGYNIA.*

Nat. ord. BROMELIACEÆ.
TILLANDSIA. Suprà, vol. 2. fol. 105.

T. *acaulis;* foliis oblongo-lanceolatis acuminatis undulatis recurvis, floribus aggregatis sessilibus.

Subacaulis *cæspites latos proliferos efformans.* Folia *oblongo-lanceolata, acuminata, undulata, cæsia, lepidota, serrulata, utrinque concolora.* Flores *albi, in capitulo sessili aggregati, bracteis membranaceis, venosis, apice serrulatis intermixtis.*

A pretty little epiphyte, native of Rio Janeiro, for which we are indebted to Mrs. Arnold Harrison, who obligingly communicated it in August 1827.

It never grows more than 3 or 4 inches high, producing suckers freely, by which it is easily increased. If suffered to grow without these being removed, it soon forms broad patches hanging over the sides of the pot. Its leaves are a dull sea-green; its flowers white, in a sessile cluster in the bosom of the leaves; they appear at uncertain seasons, chiefly in March, April, and August.

Requires the heat of the stove, and a light, sandy, poor soil.

J. L.

* Tillandsia was so named after Elias Tillands, born in 1640, died in 1692, who was the Keeper of the Botanic Garden at Abo. He paid much attention to the Botany of Finland; and between 1681 and 1688 published a catalogue of the plants of the country, written in Latin, Swedish, and Finnish, with wood-cuts.

GESNÉRIA* rútila.

Brilliant Gesneria.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. GESNERIEÆ.
GESNERIA. Suprà, vol. 4. fol. 329.

G. *rutila;* herbacea, hirsuta, foliis oppositis oblongis grossè crenatis utrinque concoloribus, floribus axillaribus solitariis erectis, calycibus inflatis, corollis pedicello longioribus.

Caulis *erectus, teres, hirsutus.* Folia *opposita, petiolata, oblonga, grossè crenata, hirsuta, utrinque concolora.* Flores *axillares, solitarii, erecti;* pedicelli *hirsuti, foliis multò breviores.* Calyx *inferus, inflatus, basi præsertim pilosus.* Corolla *coccinea, ferè* 2 *uncias longa, extùs pubescens, intùs et versùs basin tubi extùs lutea;* tubo *recto subcylindraceo, parùm ventricoso;* limbo *obliquo, laciniis erectis, subrotundis, superiore emarginato multò majore.* Glandulæ *hypogynæ,* 2, *ad basin superiorem ovarii.*

Native of South America, probably Brazil, whence it was imported by the Comte de Vandes, in whose Garden at Bayswater it was drawn, in September 1827.

A stove plant, growing to the height of 2 or 3 feet, and propagated by cuttings.

The stem is erect, round, and hirsute. The leaves are opposite, stalked, oblong, coarsely crenated, hirsute, of the same colour on each side. The flowers are axillary, solitary, erect, with hirsute pedicels shorter than the leaves. The calyx is inferior, inflated, pilose, particularly at the base. The corolla is scarlet, about 2 inches long,

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* Gesneria was named in honour of the celebrated Conrad Gesner, born at Zurich in 1516, and died in 1565. He was one of the first Botanists of his age; and remarkable, among other things, for the value he attached to characters derived from the seeds of plants.

pubescent externally, in the inside and towards the base of the tube on the outside yellow; its tube is straight, nearly cylindrical, slightly ventricose; the limb oblique, with erect, roundish segments, the uppermost of which is emarginate, and larger than the rest. The hypogynous glands are two, at the base of the upper side of the ovarium.

J. L.

1159

J. Watts

ANTHOLÝZA* æthiópica; *var.* minor.

Small Cape Antholyza.

TRIANDRIA *MONOGYNIA.*

Nat. ord. IRIDEÆ.

ANTHOLYZA L. — *Inflorescentia* spicata. *Spatha* bivalvis. *Corolla* tubuloso-sexfida, regularis (inæqualis); *faux* sensim turbinata v. abruptè cylindracea; limbus nutans. *Stamina* secunda (ascendentia). *Stigmata* convoluto-capillaria, integra. *Capsula* coriacea, oblato-rotunda, (lævis). *Semina* biserialia, oblato-globosa, corticosa, contactu subdeformia, in loculamentis singulis pauca. *Ker Monogr. irid. p.* 155.

A. *æthiopica.*
A. æthiopica. *Linn. sp. pl.* 1. 54. *Thunb. prodr.* 7. *flor. cap.* 1. 121. etc.
A. ringens. *Andrews reposit.* 32. *Pers. syn.* 1. 42. nec aliorum.
A. præalta. *Redouté liliac.* 387. *Römer et Sch. syst. veg.* 1. 446. fide Ker.
β. minor.
A. æthiopica *β. Bot. mag.* 1172.

Caulis *bipedalis.* Folia *ensiformia,* $1\frac{1}{2}$ *unciam lata, ferè duos pedes longa.* Flores *secundi, perianthii dimidio superiore coccineo, inferiore luteo viridi.*

A handsome Cape bulbous-rooted plant, thriving in light sandy soil in a cool greenhouse. It has long been an inhabitant of European Gardens, but seldom makes its appearance in collections. Our drawing was obtained in the Garden of the Comte de Vandes, three or four years ago. Flowers in May and June.

The *stem* is about 2 feet high. The *leaves* are ensiform, an inch and half broad, and almost 2 feet long. The

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* Antholyza, from ἄνθος, a flower, and λύσσα, rage; so named in consequence of a fancied aspect of rage exhibited by the flower, which has been likened to a long-necked animal ready to bite.

flowers are strictly one-sided; their upper half is scarlet, their lower yellowish green.

Mr. Ker, in his last revision of the genus, considers this as the only certain species, all the others being more or less doubtful.

J. L.

NOTE *to Brunsvigia ciliaris,* fol. 1153.

Mr. Slater informs us, that the method he has followed with his Brunsvigias has been to keep them plunged in sand, in a very high temperature, during the months of June and July; and at other seasons to place them in a vinery. Under this plan of treatment, B. multiflora flowered three years successively; B. Josephinæ every other year during six years, with two stems, having from 47 to 56 flowers each. The root of B. ciliaris, from which our drawing was taken, produced, the year before, between 80 and 90 flowers on a single stem; at the time it was figured it had two stems, as represented in our plate.

J. L.

1828

J. Watts. sc.

AMYGDALUS* communis; *var.* macrocarpa.

Large-fruited Almond.

ICOSANDRIA *MONOGYNIA.*

Nat. ord. Rosaceæ. § *Amygdaleæ.*

AMYGDALUS.—Drupa pubescenti-velutina, cortice fibrosâ exsuccâ irregulariter secedente, putamine foraminuloso aut lævi.—— Folia *juniora conduplicata.* Flores *subsessiles, solitarii aut gemini, foliis præcociores, è gemmis squamosis orti.* Fructus *lanati.* Dec. prodr. 2. 530.

A. *communis;* foliis oblongo-lanceolatis serrulatis, floribus solitariis, calycibus campanulatis, fructibus ovoideo-compressis tomentosis. *Dec. l. c.*

δ. *macrocarpa;* foliis latioribus acuminatis vix cinereis, pedunculis brevioribus turgidis, fructibus majoribus umbilicatis apice acuminatis putamine duro. *Dec. l. c.*

Amandier à gros fruits. *Duham. arb. ed. 2. v. 4. p.* 112. *Noisett. jard. fr. p.* 7. *t.* 3.

Of this beautiful variety of the Almond there is a single specimen in the Garden of the Horticultural Society at Chiswick, where our drawing was made, in May 1827. It is in most respects like a common Almond, but its flowers are almost twice as large, and remain in perfection for a longer period.

The fruit is larger than that of the common Almond. According to M. Seringe, the two kinds of Almond called *Amande Pistache* and *Amande Sultane,* are referable to this variety.

Increased by budding upon plums or other drupaceous plants.

J. L.

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* Ἀμυγδαλέα, the Greek name of the tree: macrocarpa, from μακρὸς, large, and καρπὸς, fruit.

CRATÆGUS* heterophýlla.

Various-leaved Hawthorn.

ICOSANDRIA *DI-PENTAGYNIA.*

Nat. ord. ROSACEÆ.
CRATÆGUS. *Suprà, vol.* 13. *fol.* 1128.

C. *heterophylla;* foliis lucidis tardè deciduis lanceolatis cuneatis apice dentatis, pinnatifidisve, tubo calycis fusiformi, cymis multifloris, floribus monogynis, stipulis maximis pinnatifidis.
Mespilus constantinopolitana. *Hort.*
C. heterophylla. *Flugge ann. mus.* 12. *t.* 38. *Decand. prodr.* 2. 629.
C. aronia. *Watson dendrolog.* 165. not of *Willd.*

Arbor *mediocris, staturâ quam C. oxyacanthæ, proceriore.* Folia *lucida, glaberrima, tardè decidua; propè inflorescentiam et in ramulis vetustis lanceolata, integerrima, v. oblonga, cuneata, apice tridentata; in ramulis vegetioribus pinnatifidis, serratis, subcuneatis, stipulis maximis, pinnatifidis, semi-cordatis.* Cymæ *multifloræ, congestæ, glaberrimæ.* Calycis *tubus lineari-oblongus, limbus brevi-campanulatus, dentes acuminatæ eglandulosæ.* Petala *denticulata, alba.* Stylus *crassus, simplex.* Fructus *nigri, ovales v. fusiformes, limbo calycis persistente coronati.*

A beautiful kind of Hawthorn, very little known in our English Gardens, although it has existed in collections in this country for many years. It is by far the handsomest of the white-flowered species, and is remarkable for its black berries in the autumn.

In M. Decandolle's *Prodromus,* the native country is supposed to be North America; but if we consider the little affinity that it has with any known North American species, and its close resemblance to C. *maroccana,* it

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* The κράταιγος of the Greeks,—said to have derived its name from κράτος, strength, in allusion to the toughness of its wood,—is supposed to have been the Azarole. Heterophylla is from ἕτερος, various, and φύλλον, a leaf.

may, we think, be safely assumed that its origin has been the East, as is indeed indicated by one of its garden names.

Our drawing was made in the Garden of the Horticultural Society, in May 1827. Propagated by grafting or budding on the common Hawthorn.

Mr. Watson has confounded it with the C. aronia, a very different species, more nearly related to the Azarole. We have specimens, by the liberality of Messrs. Loddiges, from the very plant from which Mr. Watson's figure, which, by the way, is not good, was made.

A middle-sized tree, with the habit of C. oxyacantha, but more robust. *Leaves* lucid, quite smooth, falling off late in the season; near the inflorescence, and on old branches, lanceolate, and quite entire, or oblong, cuneate, 3-toothed at the end; on the more vigorous branches pinnatifid, serrate, somewhat cuneate: *stipulæ* very large, pinnatifid, half cordate. *Cymes* many-flowered, compact, perfectly smooth. *Calyx* with a linear-oblong tube, a short campanulate limb, and acuminate, glandless teeth. *Petals* denticulate, white. *Style* thick, simple. *Fruit* black, oval, or fusiform, crowned with the persistent limb of the calyx.

J. L.

THRYÁLLIS* brachystáchys.

Short-spiked Thryallis.

DECANDRIA *TRIGYNIA.*

Nat. ord. Malpighiaceæ. § *Hiptageæ.*

THRYALLIS L.—*Calyx* 5-fidus, inæqualis, eglandulosus. *Petala* 5, unguiculata. *Stamina* decem. *Ovarium* 3-loculare, tristylum. *Pericarpium* siccum, triquetrum, triloculare, tripartibile, trispermum, calyce inclusum. —— Frutices *scandentes, pilis stellatis velutini.* Flores *lutei.*

T. *brachystachys;* foliis ovato-lanceolatis subtùs albidis, racemis paniculatis foliis subæqualibus.

Rami *scandentes, teretes, cinerei, densè pubescentes.* Folia *opposita, ovato-lanceolata, acuminata, basi subcordata dorso utrinque glandulosa, undique pilis stellatis velutine, suprà glauca, infrà albida.* *Stipulæ* 0. Racemi *paniculati, axillares et terminales, foliis haud multùm longiores, undique densè velutini.* Bracteæ *subulatæ, deciduæ.* Calyx *irregularis, 5-partitus, corollæ ferè longitudine, persistens, limbo sub anthesi revoluto.* Petala 5, *longè unguiculata, subrotundo-cordata, erosa, luteo-aurantiaca.* Stamina 10. Ovarium *triloculare, tristylum.* Pericarpium *siccum, inappendiculatum, calyce persistente inclusum, 3-loculare; placentis 3 magnis, fungosis.* Semina ......

The genus Thryallis is one of the most obscure in the science of Natural History. It was established by Linnæus, upon a specimen which has never been seen by any other person, but to which he referred the rude wood figure in *Marcgraaf*, p. 79. f. 3. Sir James Smith could find no trace of it in the Linnæan Collection. We are, therefore, fortunate in having an opportunity of describing a second species, which agrees well with the description of Linnæus

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* Thryallis is an ancient Greek name for something of the Mullein kind, whose woolly leaves served to make wicks for lamps. It is not easy to conceive how Linnæus came to apply the name here, nor can we trace out any thing to account for his having done so. *Smith in Rees.* — Sprengel conjectures the θρυαλλὶς to have been the Verbascum lychnitis. Brachystachys signifies short-spiked.

in all respects, except in having three styles instead of one,—a character, that, supposing Linnæus to have made no mistake, is of little importance in the order to which Thryallis belongs: this species also confirms the propriety of deferring the genus to Malpighiaceæ, rather than to Tricoccæ (Euphorbiaceæ), as was done by Linnæus.

This new species was found near Rio Janeiro by the late Mr. Forbes, who sent seeds of it to the Horticultural Society, in 1823. Our drawing was made at the Chiswick Garden, in October 1827.

A tender, handsome, climbing, stove plant, flowering in great profusion in September and October. It attains the height of 8 or 10 feet; and is propagated by cuttings struck in peat and sand.

Branches climbing, terete, cinereous, densely pubescent. *Leaves* opposite, ovate-lanceolate, acuminate, somewhat cordate and biglandular behind at the base, velvety all over with stellate hairs, glaucous above, whitish beneath. Stipulæ 0. *Racemes* panicled, axillary and terminal, not much longer than the leaves, closely covered with velvety hair. *Bracteæ* subulate, deciduous. *Calyx* irregular, 5-parted, about the length of the corolla, persistent, with a revolute limb while in flower. *Petals* 5, on long claws, roundish-cordate, ragged at the edge, yellowish orange colour. *Stamens* 10. *Ovarium* with 3 cells and 3 styles. *Pericarpium* dry, without appendages, included in the persistent calyx, 3-celled, with 3 large, spongy placentæ. *Seeds* —— not seen.

J. L.

1163

LÍNUM* sibíricum; *var.* Lewisii.

North-West American Flax.

PENTANDRIA *PENTAGYNIA.*

Nat. ord. LINEÆ.

LINUM L. — *Flores* proportione partium quinaria. *Sepala* integra. *Styli* rarissimè 3, cum petalis staminibus sepalisque 5. *Decand. prodr.* 1. 423.

L. *sibiricum;* glabrum erectum elatum foliis linearibus acutis patulis, sepalis ovalibus basi 5-nerviis, exterioribus acutiusculis interioribus obtusissimis margine membranaceis, petalis integris calyce triplò quadruplòve majoribus. *Dec. prodr. vol.* 1. *p.* 427.
L. perenne, *var.* sibirica. *Linn. sp.* 397.
L. austriacum. *Bot. mag. t.* 1086, not of *Linn.*
Var.; foliis glaucis, floribus majoribus.
L. Lewisii. *Pursh. fl. am. sept.* 1. 210.

Perenne, glabrum, glaucum. Caules *erecti, pedales.* Folia *linearia, utrinque acuta, patentia, avenia.* Sepala *ovata, acuta, basi 3-venia, interioribus margine membranaceis.* Petala *pallidè cærulea, apice rotundata, integra, calyce 3-plò majora.*

A handsome, hardy perennial, native of the north-west country of North America, whence it was sent to the Horticultural Society, in 1826, by Mr. Douglas. It is about a foot or foot and half high; and flowers during May, June, and July.

We have no doubt that Nuttall is right in referring this to the Linum sibiricum, from which, judging from our wild specimens from Dr. Fischer, it differs in nothing except having larger flowers, and in being more glaucous. The existence of the same plant in Siberia and north-

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* The λίνον of the Greeks, which was probably the same as our common flax, is derived by De Theis from the Celtic word *llin*, signifying a thread; whence comes *linen* in English, *linge* in French, and *linum*, with its derivatives, in Latin.

west America, is only one of numerous other examples of the great resemblance of the Floras of those two countries.

Perennial, glabrous, glaucous. *Stems* erect, about a foot high. *Leaves* linear, acute at each end, spreading, without veins. *Sepals* ovate, acute, 3-veined at the base, the inner ones membranous at the edge. *Petals* pale blue, rounded at the apex, entire, three times as large as the calyx.

J. L.

1164

MAGNÓLIA* Yúlan, *var.* Soulangiána.

M. Soulange's Magnolia.

POLYANDRIA *POLYGYNIA.*

Nat. ord. MAGNOLIACEÆ.
MAGNOLIA. Suprà, vol. 4. *p.* 325.

M. *Yulan;* foliis deciduis obovatis abruptè acuminatis, junioribus pubescentibus post anthesin prodeuntibus, floribus erectis 6-9 petalis, stylis erectis. *Decand. syst.* 1. 455. *Prodr.* 1. 81.
Le Yu-lan. *Mém. Chin.* 3. *p.* 441.
M. precia. *Correa de Serra in Vent. Malm. n.* 24. *adn.* 2.
M. conspicua. *Salisb. parad.* 38. *t.* 38. *Ait. Kew. ed.* 2. *v.* 3. *p.* 380.
M. Yulan. *Desf. arb.* 2. *p.* 6. *pict. hort. par.* 43. *t.* 37. *Bonpl. nav. p.* 53. *t.* 20.
Var. Soulangiana; *floribus extùs purpurascentibus.*
M. Soulangiana s. M. precia flore albo purpurascente *Soulange-Bodin, notice sur une nouvelle espèce de Magnolie.*

A very handsome variety of the Yulan Magnolia, obtained, as we are informed by the Chevalier Soulange-Bodin, in his Garden at Fromont, from a seed of M. Yulan, which had been fertilised by the pollen of M. obovata.

Our drawing was made at the Nursery of Messrs. Young, of Epsom, by whom the variety had been procured from M. Soulange. It has been so short a time in this country, that little is known of its good qualities except by report; we shall, therefore, give M. Soulange's account nearly in his own words, premising that we have found the blossoms exceedingly fragrant, and that it is probable the variety will be adapted to our climate.

" It has considerable affinity to the two species

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* Magnolia, in record of the merits of Peter Magnol, formerly Professor of Botany at Montpellier, born in 1638, died in 1715; author of several Botanical works of merit. Yulan is the Chinese name of the species; called Soulangiana in compliment to the gentleman who raised it.

M. Yulan and M. obovata; but it differs from both in so many circumstances, that it must be considered either as a new species, or at least as a constant variety, or rare and precious hybrid, produced by the intermixture of its two parents.

"The differences and resemblances between it and them are as follows:—

"It resembles Yulan in its bark, in the form of its leaves, which are, however, rather firmer, in the regularity of its beautiful corolla, and, finally, in the delicious fragrance of its flowers" (to which may be added all other essential particulars).

"It differs from that species in the period at which it expands its blossoms; the Yulan bears them upon its naked branches, before the young shoots have burst through the silky bracteæ (scales) which enclose them; and as soon as these flowers are withered, they are succeeded by those of M. Soulangiana, the petals of which are at first of a delicate green, becoming bright clear white in the inside, and a handsome purple on the outside.

"This union of colours is the only point in which M. obovata need be considered, for its leaves are quite differently formed, their disk tapering insensibly down to the base of the petiole; its flowers are tulip-shaped, never opening well, and have no scent; and they do not expand until the cones of M. Soulangiana are beginning to form."

J. L.

COMBRÉTUM* comósum.

Long-stamened Combretum.

DECANDRIA *MONOGYNIA.*

Nat. ord. COMBRETACEÆ.

COMBRETUM L. — *Calycis* limbus infundibuliformis 4-lobus deciduus. *Petala* 4, inter lobos calycis inserta. *Stamina* 8, biserialia; ex his 4 petalis opposita altius inserta et longè exserta. *Ovarium* 2-5-ovulatum. *Stylus* exsertus acutus. *Fructus* 4-pteri, 1-loculares, 1-spermi, indehiscentes. *Semen* angulatum pendulum. *Cotyledones* plicâ mediâ reflexæ cruciato-divaricatæ. —— Frutices arboresve *subscandentes.* Folia *sæpiùs opposita* integerrima. Spicæ *terminales et axillares, interdùm paniculatæ.* Dec. prodr. 3. p. 18.

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§ Partes floris quinariæ.

C. *comosum;* foliis ellipticis acutis basi subcordatis glabriusculis, paniculis terminalibus laxis multifloris, petalis obtusis, bracteis lanceolatis, ramulis scandentibus pubescentibus.

C. comosum. *G. Don, in Linn. trans.* 15. *p.* 433. *Dec. prodr.* 3. 20.

Rami *scandentes, teretes, pubescentes.* Folia *opposita v. terna, elliptica v. oblonga, acuta, basi subcordata, suprà subnitida, infrà venis petioloque pilosiusculis.* Paniculæ *in fastigium ramorum, ramosæ, multifloræ, aphyllæ, bracteis parvis, ovato-lanceolatis, deciduis.* Flores *in apicibus ramulorum congesti.* Calyx *infundibularis, subpubescens, limbo 5-dentato.* Petala 5, *unguiculata, linearia, obtusa, lætè purpurea.* Stamina *longè exserta, filamentis tenuibus, coloratis.*

This fine climbing stove plant was collected by Mr. George Don, for the Horticultural Society, in Sierra Leone, in 1821: from seeds sent home by him, a great number of plants have been distributed by the Society through the Gardens of Europe; but we believe they have

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* Combretum is a Plinian name, the application of which is now unknown; it has been capriciously given to the genus which at present bears it. Comosus, in Botanical language, indicates the presence of enlarged bracteæ or of leaves at the extremity of an inflorescence. It seems to have been used in this instance in the signification of *shaggy*, in allusion to the long hair-like filaments.

produced flowers only in the collection of the Comte de Vandes, at Bayswater. It there forms a dense entangled mass, which in May and June is covered with large panicles of flowers. These are not of so deep and vivid a carmine as those of Combretum purpureum (Poivrea coccinea of Decandolle); but they are more elegant in their appearance, and are produced in greater profusion.

Propagated by cuttings, which strike root readily in a mixture of loam and sand.

It appears to be very common in thickets at Sierra Leone, as it was found both by Smeathman and Afzelius, and is often sent to England among seeds from that colony.

Branches climbing, round, pubescent. *Leaves* opposite or ternate, elliptical or oblong, acute, somewhat cordate at the base, rather shining above, slightly hairy at the veins and on the petiole beneath. *Panicles* terminating the branches, divided, many-flowered, leafless, with small ovate-lanceolate deciduous bracteæ. *Calyx* funnel-shaped, somewhat pubescent, with a five-toothed limb. *Petals* 5, unguiculate, linear, obtuse, bright purple. *Stamens* far exserted, with slender, coloured filaments.

J. L.

COLLÓMIA* lineáris.

Linear-leaved Collomia.

PENTANDRIA *MONOGYNIA.*

Nat. ord. Polemoniaceæ.

COLLOMIA Nutt. — *Calyx* membranaceus, obconicus, 5-fidus, glandulosus, laciniis 3-veniis. *Corolla* sub-hypocrateriformis, limbo 5-fido. *Stamina* intra faucem corollæ inserta, inæqualia. *Ovarium* disco cyathiformi lobato insertum. *Capsula* trilocularis, 3-valvis, loculicido-dehiscens, axi liberâ trialatâ. *Semina* solitaria mucosa. —— Herbæ (*Americanæ*), foliis *integris, rariùs divisis,* floribus *sæpiùs roseo-luteis, involucratis.*

C. *linearis;* foliis ovato-lanceolatis integerrimis opacis uniformibus: superioribus subtùs pubescentibus, floribus capitatis, caule ramoso piloso.

C. linearis. *Nuttall gen.* 1. 126. *Douglas journ. ined.*

Annua. Caulis *erectus, ramosus, subpubescens, supernè glandulosus.* Folia *alterna, sessilia, ovato-lanceolata, integerrima, glabra, v. minutissimè, præsertim superiora, glandulosa.* Flores *in capitulis terminalibus, glandulosis, foliis involucratis, aggregati, rariùs axillares, solitarii.* Calyces *obconici, glandulosi, membranacei, angulati, 5-fidi, laciniis angustè ovatis, obtusis, herbaceis, tubo corollæ triplò v. quadruplò brevioribus.* —— Obs. *laciniæ calycis triveniæ, venis lateralibus intramarginalibus, angulis aveniis diaphanis.* Corolla *sub-hypocrateriformis, tubo filiformi, rufo, piloso, apice paululum dilatato, limbo plano, roseo, 5-partito, laciniis brevioribus, ovalibus, obtusis.* Stamina 5, *intra faucem tubi inclusa, irregulariter inserta.* Antheræ *oblongæ.* Ovarium *parvum, oblongum, intra discum viridem cyathiformem 5-lobum insertum,* 3-*loculare, trispermum; ovulis peltatis.* Stylus *filiformis, tubi longitudine.* Stigma *trilobum.* Capsula *calyce tecta, obovata,* 3-*locularis,* 3-*valvis, valvis loculicido-dehiscentibus ab axi trialatâ liberâ secedentibus.* Semina *solitaria, brunnea, hilo faciali, embryone plano in axi albuminis cornei, radiculâ brevi conicâ inferâ.* —— Obs. *Testa constat è* vasis spiralibus, *numerosissimis mucilagine involutis, tenerrimis, aquâ effusâ facillimè cum elasticitate prosilientibus, demùm in annulis solitariis undequaque partitis.*

A neat little hardy annual, more remarkable as a Botanical curiosity than for its beauty. It was found by

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* So named by Nuttall, from κόλλα, glue, in allusion to the sticky mucilaginous coat of the seeds.

Mr. Douglas in great abundance in North America, from Lake Winipeg to the Western Ocean, between 38° and 49° of northern latitude. It has now almost become naturalised in the Garden of the Horticultural Society, where our drawing was made. If sown at different seasons, it will continue to flower during the whole year, excepting the severest months of winter.

The genus Collomia, like several other genera of Polemoniaceæ, is remarkable for a mucous matter in which the seeds are enveloped: if the seeds are thrown into water, this mucus instantly dilates and forms around them like a cloud, and in a short time acquires a volume greater than that of the seed itself. Upon examining the cause of this singular phenomenon, *it will be found to depend upon the presence of an infinite multitude of exceedingly delicate and minute spiral vessels, lying coiled up, spire within spire, on the outside of the testa;* when dry, these vessels are confined upon the surface of the seed by its mucus, without being able to manifest themselves; but the instant water is applied, the mucus dissolves, and ceases to counteract the elasticity of the spiral vessels, which then dart forward at right angles with the testa, each carrying with it a sheath of mucus, in which it for a long time remains enveloped, as if in a membranous case. This observation is particularly interesting, inasmuch as spiral vessels are, we believe, now for the first time seen upon the external surface of a vegetable organ; they have been hitherto supposed to exist solely within the substance of plants, accompanying either the medullary sheath, or the veins which diverge from it,—with one or two exceptions, of which the seed of Casuarina is one.

J. L.

Note.

There is another very fine species of this genus in the Gardens, likewise discovered by Mr. Douglas in North-west America, and called by him *Collomia grandiflora*. It differs from the present in its much larger flowers and lucid leaves, and may be specifically characterised thus:—

C. *grandiflora;* foliis oblongo-lanceolatis integerrimis lucidis ciliato-glandulosis, caule ramoso pubescente, capitulis hemisphericis pruinosis, corollâ ventricosâ: limbo erecto.

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ERIOPHÝLLUM* cæspitósum.

Spreading Eriophyllum.

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. § Heliantheæ-Helenieæ *Cassini.*

ERIOPHYLLUM Lagasca.—*Anthodium* radiatum. *Involucrum* monophyllum, campanulatum, 8-dentatum, lanatum. *Flosculi* radii fœminei, disci hermaphroditi. *Receptaculum* conicum, favosum. *Pappus* paleaceus, 4-dentatus.

E. *cæspitosum;* lanatum, foliis decurrenti-pinnatifidis incisis, superioribus tripartitis integrisve, anthodiis solitariis longè pedunculatis.

Actinella lanata. *Pursh. fl. Am. sept.* 2. 560.
Trichophyllum lanatum. *Nutt. gen. Amer.* 2. 166.
Helenium lanatum. *Spreng. syst.* 3. 574.
Eriophyllum cæspitosum. *Douglas journ. ined.*

Perennis *decumbens, cæspites densos latosque efformans.* Caules *teretes, lanati, subflexuosi.* Folia *decurrenti-pinnatifida, incisa, laciniis obtusis, suprà atroviridia, parcè lanata, subtùs lanugine albo vestita.* Anthodia *longè pedunculata, terminalia, et axillaria.* Involucrum *lanatum, campanulatum, angulatum, octo-dentatum.* Receptaculum *conicum, favosum.* Flosculi radii 8, ♀, *ligulati, lutei, oblongi, apice tridentati, tubo brevi, glanduloso;* ovarium *glabrum, arcuatum, subteres, quadratum;* pappus *brevis, paleaceus, 4-dentatus;* stylus *brevis;* stigmata *duo, linearia, recurva.* Flosculi disci *hermaphroditi, tubulosi, lutei, extùs glandulosi,* limbo *campanulato, 5-dentato, tubo subæquali;* antheræ *apice appendiculatæ, basi muticæ;* ovarium *radii;* pappus *paleaceus, 4-dentatus.* Stylus *basi paulò incrassatus, disco parvo insertus.* Stigmata 2, *linearia, recurva, intùs sulcata, apice paululum stuposa.*

Found by Mr. Douglas in North-west America, in abundance, from the sea to the valley of the Rocky Mountains, in dry open situations.

A handsome, herbaceous, perennial plant, flowering in May and June, a season when there are few yellow border flowers to be seen: it is well adapted for rock-work.

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* From ἔριον, wool, and φύλλον, a leaf, in allusion to the woolliness of the foliage.

By Pursh this plant was referred to Actinella, by Sprengel to Helenium! Nuttall has constituted it a new genus; but Mr. Douglas has ascertained that it is not distinct from Eriophyllum.

Our drawing was made in the Garden of the Horticultural Society, in May last.

A spreading, decumbent plant, forming broad, dense patches. *Stems* round, woolly, somewhat flexuose. *Leaves* decurrently pinnatifid, cut, with obtuse segments, above deep green, sparingly woolly, beneath covered with white wool. *Heads* on long stalks, axillary and terminal. *Involucrum* woolly, campanulate, angular, 8-toothed. *Receptacle* conical, honey-combed. *Florets of the ray* 8, female, ligulate, yellow, oblong, 3-toothed at the apex, with a short glandular tube; *ovarium* smooth, arcuate, roundish, square; *pappus* short, paleaceous, 4-toothed; *style* short; *stigmata* 2, linear, recurved. *Florets of the disk* hermaphrodite, tubular, yellow, externally glandular; *limb* campanulate, 5-toothed, about equal to the tube; *anthers* with an appendage at the apex, but none at the base; *ovarium* and *pappus* as in the ray. *Style* slightly incrassated at the base, inserted in a small disk. *Stigmata* 2, linear, recurved, channelled inside, a little tufted at the apex.

J. L.

ESCHSCHÓLTZIA* califórnica.

Mr. Menzies' Eschscholtzia.

POLYANDRIA *TETRAGYNIA.*

Nat. ord. PAPAVERACEÆ.

ESCHSCHOLTZIA Chamisso.—*Calyx* inferus, indivisus, calyptriformis, deciduus, in apice pedunculi infundibulari carnoso marginato insertus. *Petala* 4, fauce apicis pedunculi inserta. *Stamina* circa 40 multiseriata, basibus petalorum inserta. *Antheræ* lineares posticæ. *Stigmata* 4, quorum duo placentis opposita depauperata. *Pericarpium* siliquiforme (*Ceratium* Nob.), uniloculare, bivalve, valvis ad margines polyspermis.——Herba *perennis* (*Americæ boreali-occidentalis temperatæ*), radicibus *carnosis succosis*, foliis *decompositis*, floribus *luteis, Jove pluvio inapertis.*

Eschscholtzia californica. *Chamisso in hor. phys. Berol. p.* 73. *t.* 15. *Decand. prodr.* 3. 344.

Radix *carnosus, multiceps, succo luteo scatens.* Caules *decumbentes, ramosi, striati.* Folia *glauca, triternata, carnosiuscula, laciniis linearibus obtusis.* Flores *terminales, longissimè pedunculati.* Calyx *inferus, in apice pedunculi infundibulari, carnoso, marginato, crenulato insertus, membranaceus, calyptriformis, deciduus.* Petala 4, *lutea, basi aurantiaca, cuneata, integra, fauce cavitatis pedunculi inserta.* Stamina 10-11, *ad basin cujusque petali, serie quadruplici inserta.* Filamenta *brevia.* Antheræ *posticæ, innatæ, lineares, biloculares, longitudinaliter dehiscentes.* Ovarium *in fundo cavitatis pedunculi, cylindraceum,* 10-*striatum, uniloculare, placentis duabus parietalibus oppositis polyspermis.* Stigmata 4, *linearia, quorum* 2 *perfecta placentis alterna,* 2 *semi-abortiva placentis opposita.* Pericarpium *siliquiforme, bivalve, marginibus valvularum seminiferis.*

For the introduction of this most lovely plant to our Gardens, we are indebted to Mr. Douglas, who transmitted seed of it to the Horticultural Society, in 1826. It was found by him on the north-west coast of America, from the sources of the Multnomah River, in about 43° north latitude to 40° south, in open prairies on the banks of streams.

With us, each plant forms a wide patch of decumbent stems, covered

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* So named by Chamisso, in honour of Dr. Eschscholtz, the companion of his voyage round the world.

with a fine, healthy, glaucous foliage, upon which repose hundreds of rich yellow flowers, unfolding their interior, of a dazzling brightness, under the influence of the sun, but closing at the approach of rain. They begin to open in the early part of June, and continue to appear during the greater part of the year.

The species is perfectly hardy, and is propagated readily by seeds, which are produced in abundance. It is requisite to observe the following precautions in its management. The seeds should be sown in March, in small pots, and placed in a frame, with a little heat. When the young plants have acquired ten or twelve leaves each, and not before, they should be turned out of their pots in the open border, in the place in which it is intended that they should remain. Afterwards they cannot be readily transplanted, as their root becomes very fleshy and brittle, and bleeds copiously if broken, which must necessarily happen in removing a larger plant.

Our drawing was made in the Garden of the Horticultural Society, in October 1827.

Mr. Douglas has communicated the following note upon the subject of Eschscholtzia. "During the famous expedition of Vancouver, it was found by Mr. Menzies in the Bay of Monterrey, in the autumn of 1792, and subsequently in the vicinity of other Presidios on the coast of California. The former of these places being in 36° 35′ 45″ north latitude, and its northern range 43°, gives it a habitat of 450 miles from north to south, never exceeding a degree of longitude from the coast. It is confined to open, dry, light, or sandy soils, flowering from June until destroyed by frost. It was considered by Dryander close upon Chelidonium, he not having seen the fruit."

With regard to the natural affinity and structure of Eschscholtzia, we now beg to offer a remark or two. It was referred by all its original observers,—that is to say, by Mr. Menzies, who perceived its affinity to a poppy—by Dryander, as Mr. Douglas remarks—and by Chamisso, in the Horæ Physicæ Berolinenses,—to Papaveraceæ. But M. Decandolle, unable to reconcile with that order the apparently perigynous insertion of its stamens, has placed it, with doubt, at the end of Loaseæ, a very different station. Yet if we consider the perfect accordance that it has with Papaveraceæ in all other respects, its decompound leaves, yellow milky juice, deciduous calyx, 4 petals, with 4 parcels of stamina, and its Glaucium-like fruit, it is impossible to doubt its near relationship to these plants. Indeed we are of opinion, that there is nothing even in the insertion of the stamens which would justify its separation; for, in our view, the funnel-shaped fleshy process on which the calyx, petals, and stamens, are inserted, is neither a part of the calyx nor a form of disk, but rather a peculiar extension of the apex of the peduncle,—a manifest tendency to which is observable in Chelidonium majus and Hypecoum grandiflorum.

But the most remarkable point of structure in Eschscholtzia exists in the pistillum, which appears to us to point out distinctly the real nature of the same organ in Cruciferæ, and to prove that none of the explanations hitherto offered of the theoretical formation of the pistillum of Cruciferæ have been true. In order to make this more apparent, it will be necessary to say something upon the structure of the Cruciferous pistillum.

It is well known, that in regularly formed fruits the style or stigma universally and necessarily *alternates* with the placenta, for reasons which it

would be superfluous to insist upon in this place. But in Cruciferæ the stigmata are *opposite* to the placentæ, terminating a sort of frame or replum, the two sides of which are often connected by a membranous septum, on the outside of which latter the ovula are arranged in a single row on each side; so that in many of the more highly developed plants of the order there are four placentæ opposed to each other by pairs, and forming the inner edge of each side of the replum, which itself terminates in the stigmas. To this replum is attached on each side a deciduous plate, or valve as it is called, which has no vascular connexion with either the replum, stigmata, or pedicel. In consequence of this singular arrangement of parts, it has been found extremely difficult to understand the exact nature of the Cruciferous pistillum, or to reduce it to the rules which are known to govern the formation of other compound pistilla.

According to Mr. Brown, and after him to M. Decandolle, the pistillum of Cruciferæ is to be understood to consist of two confluent ovaria, united by their placentæ, two lamellæ from each of which project into the cavity of the ovarium, and, meeting in the centre, coalesce and form the septum. This, however, does not remove the difficulty of the stigmata being opposite the placentæ, instead of alternate with them. I am not aware that any explanation of this point has been published by Mr. Brown; but M. Decandolle (*Théorie Elémentaire, ed.* 1. p. 133) accounts for it thus. He assumes that there are several kinds of simple pistilla, some of which are not to be found in an isolated state, but the possible existence of which he conceives to be demonstrated by certain compound pistilla, that cannot be reduced to their simplest state without the admission of such a position. Among these supposititious simple pistilla is one called the *Siliquelle*, "which is formed originally of three pieces, the two lateral producing ovula on their inner surface, and the outer (intermediate) one bearing no ovula; pistilla of this description make up the fruit of Nymphæaceæ, Papaveraceæ, and Cruciferæ. When two pistilla of this kind are united by the external edge of their lateral pieces, they form those fruits which are said to have intervalvular placentæ; each of these double placentæ is elongated into a style or stigma, simple in appearance, but in reality formed by two half styles grown together."

To maintain this theory, it is necessary to assume, in the first place, the existence of a simple pistillum, of a structure not only entirely hypothetical, but opposed to all we know of vegetable organization; and, in the next place, that the stigmata of the order, although so simple in appearance that no trace whatever of composition can be found in them, are nevertheless each composed of two half stigmata in a state of cohesion.

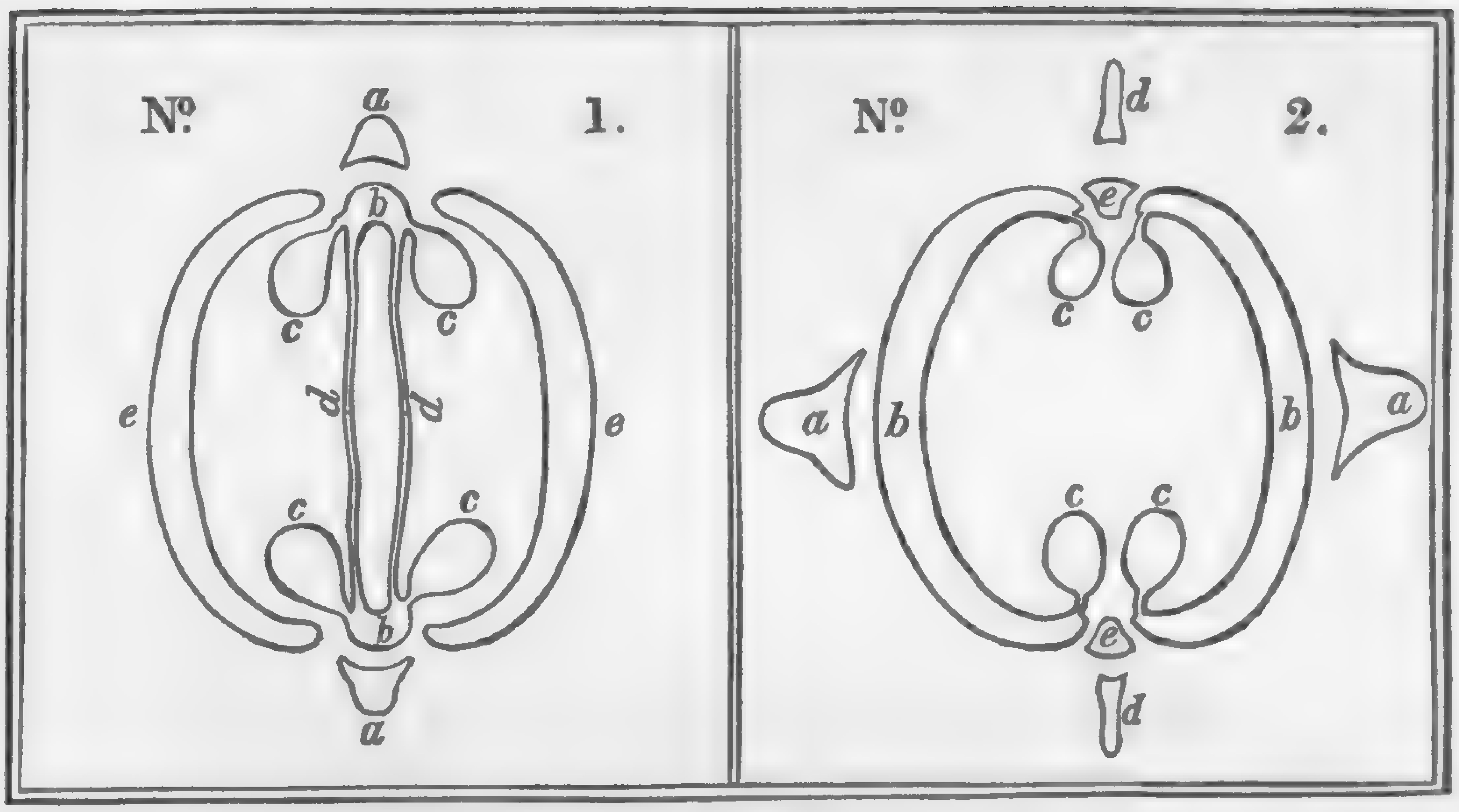
To us this explanation has always been unsatisfactory. It was difficult to believe that rules of structure, well ascertained to be uniform in other plants, should be deviated from in Cruciferæ; especially when the irregularity observable in the arrangement of other parts of the flower was taken into account. It always appeared more probable, that the anomalous nature of the pistillum depended upon some irregularity corresponding to that of the stamens, than upon peculiar laws appertaining to Cruciferæ alone.

This seems to be at length proved by Eschscholtzia, the fruit of which is so similar to that of Cruciferæ, that the uniformity of the laws under which they are both formed is not likely to be disputed. In this plant the pistillum is unilocular, with four stigmata, of which the two opposite ones

are smaller than the two others. Upon opening this pistillum we find that there are two parietal placentæ corresponding with the smaller stigmata, and that there are no placentæ opposite the larger stigmata; in other words, that it is formed of four simple pistilla, two of which are opposite and ovuliferous, with their placentæ in the usual place, alternating with themselves; and two nearly abortive, destitute of placentæ, consequently not ovuliferous, and so nearly suppressed by the superior energy of their two neighbours, that their existence would have been unknown but for the stigmata which indicate their presence. This is one way of understanding Eschscholtzia; but as the ovula are not inserted in the placentæ in a double row, but rather confusedly arranged in several rows, it may also be assumed that the lateral, imperfect, half-obliterated stigmata have a line of placenta, with ovula appertaining to themselves, but so confounded with the placentæ of their lateral and more powerful neighbours, that, in consequence of their close approximation, they cannot be distinguished. We, however, incline to the former of these two opinions. Let this be as it may, upon either supposition, the structure of Cruciferous pistilla is, we think, susceptible of explanation. We shall, for convenience, reason upon the former of the two hypotheses.

If we compare the fruit of Eschscholtzia and Cruciferæ, we shall at first, perhaps, be led to believe that while they have a certain degree of resemblance in some points, they nevertheless differ widely in others of more importance; we find both of them with two opposite parietal placentæ, connected with a quaternary arrangement of the other parts of the flower, and that in both instances their placentæ are opposite to stigmata. But we also see that in Cruciferæ dehiscence takes place by the separation of two valves from the sides of the siliqua, leaving the placentæ undivided; while in Eschscholtzia it takes place through each placenta, half of which, therefore, adheres to each edge of the two valves into which the fruit finally separates. But if we look into their structure a little more narrowly, we shall perhaps find that these differences are not only capable of reconciliation, but that they explain each other.

The fruit of Cruciferæ is separable into four parts — that is to say, into two valves without stigmata, and two double placentæ without valves; in Eschscholtzia there are two valves with placentæ and stigmata, and two stigmata without valves or placentæ. But suppose that the two valves of Cruciferæ had stigmata, as they should have (and a tendency to produce which actually exists in Iberis umbellata), and that the two stigmata of Eschscholtzia had valves, as would be regular, what would then be the difference between the two? it would be reduced to nearly this, that in Eschscholtzia the two placentiferous pieces would occupy the greater part of the pericarpium, the two sterile valves being very small; while in Cruciferæ the two placentiferous pieces would be very small, the chief part of the pericarpium being occupied by the sterile valves. To make this more apparent, let the following figures represent an imaginary section of the fruit of both Cruciferæ and Eschscholtzia: —



In No. 1, *Cruciferæ*, *a a* represents the position of the stigmata with respect to the placentæ; *b b* the two placentæ; *c c* the ovula; *d d* the double septum; and *e e* the two valves.

In No. 2, *Eschscholtzia*, *a a* represents the position of the perfect stigmata with respect to the placentæ; *b b* the sides of the pericarpium connecting the placentæ; *c c* the ovula; *d d* the position of the two abortive stigmata; *e e* the line of pericarpium corresponding with the two abortive stigmata.

Now, let the valves of Cruciferæ (*e e*, No. 1) be contracted into the space of a line, and they answer exactly to the line (*e e*, No. 2) corresponding with the abortive stigmata of Eschscholtzia—let the placentæ (*b b*, No. 1) be widened in proportion as the valves (*e e*) were contracted, and they will answer exactly to the placentiferous valves of Eschscholtzia (*b b*, No. 2).

For these reasons, it appears to us that the theoretical definition of the fruit of Cruciferæ should be this:—Pericarpium formed of four confluent pistilla, of which two are placentiferous and furnished with stigmata, and two destitute of placentæ and stigmata, but separable in the form of valves.

J. L.

1169

DRACÆNA* surculósa.

Long-shooting Dracæna.

HEXANDRIA *MONOGYNIA.*

Nat. ord. ASPARAGEÆ.
DRACÆNA L. — *Suprà, vol.* 12. *fol.* 956.

D. *surculosa;* surculis longis teretibus annulatis subaphyllis, foliis oblongis acuminatis subverticillatis, racemis terminalibus corymbosis.

Frutex 3-4-*pedalis, surculos quotannis promens,* 2-*pedales, teretes, diametro* ½-*unciali, apice foliosos, per totam longitudinem cicatricibus squamarum deciduarum annulatos.* Folia *oblonga, acuminata, breviter pedicellata, sæpiùs hic illic ternatim approximata, inde quasi verticillata.* Racemi *terminales, corymbosi.* Flores *albi,* Sansevieræ *propius accedentes quàm* Dracænæ, *et fructu perfectò mox genus novum condituri.*

A very handsome, shrubby, stove, monocotyledonous plant, exhibiting, in a small space, what may be termed a model of the plan upon which the gigantic Palms of the Tropics are formed. It rarely flowers, and has never yet produced fruit: it is probable that the latter will shew that it constitutes a genus distinct from Dracæna, to which it is referred on account of its habit rather than of its fructification, which approaches that of Sanseviera.

A native of Sierra Leone, whence it was sent to the Horticultural Society by Mr. George Don, in 1821. Our drawing was made in the Chiswick Garden, in July 1827.

A shrub, growing 3 or 4 feet high, and producing yearly slender suckers, about 2 feet long, in appearance resembling those of Asparagus, but hard, deep green, about

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* Dracæna is derived from the Greek name of a dragon, δράκων, in consequence of some of the genus having been supposed to produce the drug "dragon's blood." This was, however, a mistake.

$\frac{1}{4}$ inch in diameter, strongly marked all over by the scars of the fallen scales with which the suckers are clothed when they first appear. *Leaves* oblong, acuminate, on short pedicels, often approximated here and there by threes, whence they acquire a sort of whorled appearance. *Racemes* terminal, corymbose. *Flowers* white.

J. L.

GÍLIA* capitáta.

Capitate Gilia.

PENTANDRIA *MONOGYNIA.*

Nat. ord. Polemoniaceæ.

GILIA Fl. Per. — *Calyx* membranaceus, obconicus, 5-fidus, glaber, laciniis univeniis. *Corolla* infundibularis, 5-fidus. *Stamina* sinubus corollæ inserta. *Ovarium* annulo obscuro circumdatum. *Capsula* trilocularis, 3-valvis, loculicido dehiscens, axi libera trialatâ. *Semina* cuique loculo plura, mucosa. —— Herbæ (*Americanæ*) foliis *divisis,* floribus *sæpiùs cæruleis, nudis.*

G. *capitata;* glabra, foliis bi-pinnatifidis: segmentis linearibus incisis, floribus sessilibus densè capitatis. *Hooker in bot. mag. t.* 2698.

Caulis *erectus, bipedalis, teres, ramosus, undique glanduloso-pilosus.* Folia *irregulariter bi-tripinnatifida, glabra, laciniis lineari-lanceolatis subfalcatis, sæpè hinc incisis; suprema palmata laciniis linearibus.* Flores *terminales, spicâ nudâ, longè pedunculatâ, basi ramosâ, densè capitatâ, ovatâ aggregati.* Calyx *inferus, obconicus, membranaceus, angulatus, limbo erecto, 5-fido, laciniis ovatis, viridibus, marginatis, medio univeniis, corollâ multò brevioribus.* Corolla *hypogyna, cærulea, infundibularis, limbo erecto, 5-partito, laciniis linearibus, acutis.* Stamina 5, *sinubus corollæ inserta, eâque breviora.* Antheræ *cæruleæ, ovales, longitudinaliter dehiscentes.* Ovarium *minimum, subrotundum, disco obscuro annulari circumdatum, triloculare, ovulis cuique loculo pluribus, peltatis.* Stylus *filiformis, staminibus brevior.* Stigma *trilobum.* Capsula *oblonga, calyce persistente vestita, ovalis, papyracea, 3-locularis, 3-valvis, valvis medio intùs carinatis, carinâ angulis axeos liberæ triquetræ adversâ.* Semina *cuique loculo quatuor, oblonga, mutuâ compressione angulata, epidermine mucilagine tenaci aquâ facillimè solubili scatente.*

Common all over the face of the north-west country of North America, where it was discovered by Mr. Douglas. A pretty, hardy annual, with lively blue flowers, beginning to appear about the middle of June, and remaining in

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* Named in honour of Philip Gil, a Spaniard, who published at Rome, in conjunction with Casparo Xuarez, phytological observations upon various exotic plants cultivated about Rome. The work appeared in quarto, in 1789.

perfection for fully three months. Our drawing was made in the Garden of the Horticultural Society.

Stem erect, 2 feet high, round, branched, covered all over with glandular hairs. *Leaves* irregularly twice or thrice pinnatifid, smooth, with linear-lanceolate subfalcate segments, often cut on one side; the upper palmate, with linear segments. *Flowers* terminal, in a naked, long-stalked spike, which is branched at the base, densely capitate, and ovate. *Calyx* inferior, obconical, membranous, angular, with an erect, 5-cleft limb, ovate green segments, with a membranous margin, and a single vein in the middle, much shorter than the corolla. *Corolla* hypogynous, blue, funnel-shaped; *limb* erect, 5-parted, with linear, acute segments. *Stamens* 5, inserted into the sinuses of the corolla, than which they are shorter. *Anthers* blue, oval, bursting lengthwise. *Ovarium* very small, surrounded by an obscure annular disk, roundish, 3-celled, with several peltate ovula in each cell. *Style* filiform, shorter than the stamens. *Stigma* 3-lobed. *Capsule* oblong, covered by the persistent calyx, oval, papery, 3-celled, 3-valved, with the valves carinate in the middle of the inside, the keels being opposite to the angles of a separate 3-winged axis. *Seeds* 4 in each cell, oblong, angular on account of their mutual compression, with an epidermis abounding in a tenacious mucilage, which readily dissolves in water.

J. L.

AMELÁNCHIER* sanguínea.

Red-wooded Amelanchier.

ICOSANDRIA *PENTAGYNIA.*

Nat. ord. Rosaceæ. § *Pomaceæ.*

AMELANCHIER Med. Lindl. — *Calyx* 5-dentatus. *Petala* lanceolata. *Ovarium* decem-loculare. *Ovula* solitaria. *Pomum* 3-5-loculare, endocarpio cartilagineo. —— Arbusculæ (*Europæ* et *Americæ septentrionalis*). Folia *simplicia, serrata, decidua.* Flores *racemosi, compacti, terminales, v. laterales.* Bracteæ *lineari-lanceolatæ, deciduæ.* Stamina *calyce sæpè breviora.* Styli *glabri.* Loculi *angulo interiore* (*facie*) *pilosi.* Lindl. in Linn. Trans. 13. 100.

A. *sanguinea;* foliis oblongis utrinque rotundatis argutè serratis semper nudis, bracteis stipulisque plumosis, racemis capitatis, calycibus extùs glabris.

Mespilus canadensis β. rotundifolia. *Mich. fl. bor. Am.* 1. 291.
Pyrus sanguinea. *Ph. fl. Am. sept.* 1. 340. *Spreng. syst.* 2. 509.
Aronia sanguinea. *Nutt. gen.* 1. 306.
Amelanchier? sanguinea. *Decand. prodr.* 2. 633.

Frutex *deciduus, 3-4-pedalis in horto, ramis rubris.* Folia *oblonga, utrinque obtusa, semper glabra, argutè serrulata, demùm subcoriacea* (*more* Amelanchierum). Stipulæ *plumosæ, deciduæ.* Racemi *terminales, coarctati v. capitati, glabri, bracteis deciduis, plumosis.* Calyces *extùs glabri, intùs lanati.* Petala *lineari-oblonga, subcuneata.* Fructus *pisiformes, ovati, atropurpurei.*

A handsome hardy shrub, resembling the Snowy Mespilus in general appearance, but distinguished from that, and all other species of the genus, by its young leaves being perfectly destitute of pubescence.

A native of Hudson's Bay, whence living plants were

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* Amelanchier is, according to Clusius, a Piedmontese word; it has long been enlisted into the service of Botany as a specific name, and more recently has been used as the generic appellation of the group of which the original Amelanchier is the type.

sent to the Horticultural Society by William Williams, Esq., Governor of Moose Factory, in 1824.

We possess specimens collected by the late Mr. Frazer, in the southern states of North America; and Pursh gives the banks of the Columbia as another station: but it is to be suspected that he confounded with it two very distinct species seen by Mr. Douglas in that country.

A deciduous shrub, growing in the garden 3 or 4 feet high, with red branches. *Leaves* oblong, obtuse at each end, always smooth, finely serrulated, finally subcoriaceous, like the other Amelanchiers. *Stipules* plumose, deciduous. *Racemes* terminal, contracted or capitate, smooth, with deciduous, plumose bracteæ. *Calyxes* externally smooth, internally woolly. *Petals* linear-oblong, somewhat cuneate. *Fruit* pea-shaped, ovate, deep purple.

J. L.

1172

CATTLEYA* crispa.

Curled-petaled Cattleya.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDEÆ. § *Epidendreæ* Lindl.
CATTLEYA. Suprà, vol. 11. *fol.* 953.

C. *crispa;* perianthii laciniis exterioribus lanceolatis unguiculatis: interioribus latioribus undulatis crispis, labello crispo acuminato.

Folium *solitarium, bulbo subcylindraceo, angulato insidens, oblongo-lanceolatum, emarginatum.* Spica, *ex axillâ folii,* 4-5-*flora.* Perianthii *laciniæ albæ, exteriores lineari-lanceolatæ, unguiculatæ, interioribus undulatis crispis angustiores.* Labellum *acuminatum, intùs atropurpureum, margine quàm maximè crispa.*

This splendid epiphyte was sent from Rio Janeiro to the Horticultural Society by Sir Henry Chamberlayne, Bart. in 1826. It flowered in the stove in the Chiswick Garden in August 1827. It is very distinct from all the other species of Cattleya, both in colour and in the form of the labellum and other segments of the flower. There are now five species of Cattleya upon record.

Cultivated in decayed vegetable mould, in which it grows freely.

Leaf solitary, seated on a subcylindrical, angular bulb, oblong-lanceolate, emarginate. *Spike* of 4 or 5 flowers, from the axilla of the leaf. *Segments* of the perianthium white, the outer linear-lanceolate, unguiculate, narrower than the inner, which are wavy and curled at the edges. *Labellum* acuminate, deep purple inside, with an exceedingly curled margin.

J. L.

* So called in compliment to William Cattley, Esq., of Barnet, in Hertfordshire, a great patron of Botany, and the most ardent collector of rare plants of his day.

1173

STREPTOCÁRPUS* Réxii.

Cape Streptocarpus.

DIANDRIA *MONOGYNIA.*

Nat. ord. BIGNONIACEÆ. § *Didymocarpeæ.*

STREPTOCARPUS. — *Calyx* pentaphyllus æqualis. *Corolla* tubuloso-infundibularis, fauce ventricosâ, limbo obliquo 5-lobo, subæquali. *Stamina* duo anteriora fertilia, antheris glabris connatis loculis divaricatis; duo superiora sterilia tuberculiformia. *Ovarium* rectum, lineare, teres, uniloculare, placentis duabus didymis, lamellis in medio conniventibus dissepimentum spurium formantibus utrinque revolutis in margine ovuliferis; hinc ovarium quasi 4-loculare. *Stylus* linearis compressus. *Stigma* bilabiatum dilatatum, lobis reniformibus marginatis, inferiore majore. *Capsula* siliquosa, spiraliter torta, structurâ ovarii, loculicidò dehiscens, polysperma. *Semina* numerosissima, minuta, glabra; matura non vidi.——Herba *cæspitosa, acaulis.* Folia *humifusa rugosa.* Flores *axillares è racemo sessili petiolo adnato prodeuntes.*

Streptocarpus Rexii.

Didymocarpus Rexii. *Hooker, Exotic Flora, t.* 227.

Herba *acaulis, perennis, sempervirens, cæspitosa.* Folia *rugosa, ovato-oblonga, crenata,* 6-9 *uncias longa,* 3-4 *uncias lata, subsessilia, villosa, venis subtùs crassis prominentibus, pallidis.* Pedunculi *ex axillis foliorum erecti, purpurei, pilosi, sex uncias alti, versùs apicem bibracteolati.* Flores *in initio penduli, mox cernui, demùm post anthesin erecti.* Calyx *inferus,* 5-*sepalus, pubescens.* Corolla 2 *uncias longa, infundibularis, recta, pubescens, limbo* 5-*lobo obliquo, lobis rotundatis subæqualibus, inferioribus medio ad basin atropurpureo penicillatis.* Stamina *duo, inferiora medio tubi inserta, inclusa;* filamentis *linearibus, apice arcuatis;* antheris *reniformibus, bilocularibus, connatis.* Stamina *duo, superiora, tuberculiformia.* Discus *parvus, hypogynus, annularis.* Ovarium *teres, subulatum, purpureum, pubescens, uniloculare, placentis duabus parietalibus, didymis, conniventibus, utrinque revolutis, in margine ovuliferis.* Stylus *linearis, pubescens, compressus.* Stigma *reniforme, bilabiatum, cucullatum, fimbriatum, labio inferiore majore.* Capsula *erecta,* 5 *uncias longa, teres, cylindracea, spiraliter torta, structurâ interiore omninò ovarii.* Semina *minuta, glabra.*

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* From στρεπτὸς, twisted, and καρπὸς, fruit. Rexii, according to Dr. Hooker, is in compliment to George Rex, Esq., a gentleman upon whose lands, at the Knysna, in South Africa, it was discovered by Mr. Bowie.

A beautiful stove perennial plant, flowering every month in the year in the utmost profusion. It rivals in this respect the Gloxinia speciosa, while it surpasses it in the elegance of its figure, and the delicacy of its colouring. It is easily cultivated in light peat and loam, with a little sand; and is increased by seeds, which are produced in great quantities from the singularly twisted pods.

Our drawing was made in June 1827, in the Hothouse of the Comte de Vandes, at Bayswater.

From Didymocarpus this genus differs in having a 5-leaved, not 5-lobed, calyx; a stigma consisting of two reniform, unequal lips, not simple; and finally, a long, spirally twisted fruit, not a straight, comparatively short one.

After a careful inspection of the ovarium and nearly ripe fruit of this plant, we are persuaded that the genera to which it is allied have no sufficient peculiarities to distinguish them from Bignoniaceæ. The characters which have been relied upon by Mr. Don as distinctive of his Didymocarpeæ, are a supposed 4-celled fruit, a simple stigma, and numerous minute round seeds, with a radicule longer than the cotyledons. But we have long since shewn that the fruit is certainly not more than bilocular, the two supposed additional cells being produced by the projection of the lamellæ of the placentæ, as in Martynia and similar plants; this was stated from an examination of ripe fruit only: but it now appears from the ovarium of Streptocarpus, that, in that genus at least, the fruit is in fact only unilocular, there being no cohesion between the placentæ during the period of flowering. In the structure of their capsule, therefore, Didymocarpeæ do not differ from Bignoniaceæ. In Streptocarpus the stigma is 2-lipped, the lips being unequal and reniform; the character of a simple stigma ascribed to Didymocarpeæ is therefore untenable. That derived from the proportion borne by the radicule to the cotyledons, is obviously insufficient by itself to distinguish Didymocarpeæ as an order; but it may be used advantageously as a sectional character.

It should be observed, that the above remarks do not apply to Cyrtandra, and the plants related to it, with baccate fruit, which may perhaps be allowed to constitute a distinct order, of which we must wait for another opportunity of speaking.

J. L.

1474

COLLÓMIA grandiflóra.

Large-flowered Collomia.

PENTANDRIA *MONOGYNIA.*

Nat. ord. POLEMONIACEÆ.
COLLOMIA. — *Suprà, vol.* 14. *fol.* 1166.

C. *grandiflora;* foliis oblongo-lanceolatis integerrimis lucidis ciliato-glandulosis, caule ramoso pubescente, capitulis hemisphericis pruinosis, corollâ ventricosâ : limbo erecto. *Lindley, suprà, fol.* 1166, *in notâ.*
C. grandiflora. *Douglas journal ined.*

Caulis *erectus, teres, ramosus, purpureus, in solo pingui 2-pedalis, versùs fastigium pubescens.* Folia *ovato-lanceolata, sessilia, glanduloso-ciliata, suprà lucida.* Flores *in capitulis hemisphericis aggregati, foliis bracteiformibus undique glandulis irroratis involucrati.* Calyx *villosus, glandulosus, infundibularis.* Corolla *C. linearis, sed ocrea,* 3-*plò major, ventricosa, limbo erecto.* Capsulæ 3-*valves, calyce inclusæ, triloculares, trispermæ, dehiscentiâ loculicidâ.* Semina *oblonga, fasca, facie sulcata, mucosa, sed minùs quàm C. linearis.*

A much finer species of Collomia than that figured in the last Number, discovered by Mr. Douglas in the north-west of North America, in all the country bordering on the river Columbia, as far to the eastward as the valleys of the Rocky Mountains, but not beyond that great dividing ridge.

It is a hardy annual, flowering abundantly in June and July. It grows about 2 feet high, and should be cultivated in a shady border in any poor soil among other plants. If in hot, dry, and exposed places, it is apt to perish before flowering or ripening its seeds. If in rich soil, it produces too many leaves and too few flowers. The glandular fringes of the leaves and bracteæ are a pretty microscopic object.

Stem erect, round, branched, purple, in rich soil becoming 2 feet high, towards the summit pubescent. *Leaves*

ovate-lanceolate, sessile, ciliated with glands, shining on the upper surface. *Flowers* collected in hemispherical heads, surrounded with floral leaves frosted all over with glands. *Calyx* villous, glandular, funnel-shaped. *Corolla* like that of Collomia linearis, but three times as large, and of a yellow-ochre colour, inflated, and with an erect limb. *Capsules* 3-valved, included in the calyx, 3-celled, 3-seeded, with a loculicidal dehiscence. *Seeds* oblong, brown, furrowed along the face, mucous, but less so than those of Collomia linearis.

Our drawing was made in the Garden of the Horticultural Society, where it was received from Mr. Douglas, in April 1826.

J. L.

Hart

Watts s.

LÍPARIS* eláta.

Tall Liparis.

GYNANDRIA *MONANDRIA.*

Nat. ord. Orchideæ. § *Malaxideæ.*
LIPARIS.—Suprà, vol. 11. *fol.* 882.

L. *elata;* foliis oblongo-lanceolatis acuminatis undulatis plicatis, bracteis foliaceis reflexis, labello obcordato bituberculato, caulibus ovatis.

Herba *terrestris, caules ovatos, breves, cicatrizatos efformans.* Folia *oblongo-lanceolata, acuminata, undulata, plicata, glabra, basi vaginantia, pedales v. circiter.* Scapus *erectus, simplex, bipedalis, angulatus, angulis alatis.* Spica *cylindracea, sensim elongata, apice nutans.* Bracteæ *ovatæ, virides, reflexæ, ovario breviores.* Perianthium *patens;* sepala exteriora *fusca, supremo lineari apice recurvo, inferioribus brevioribus, oblongis, obtusis, labello suppositis, collateralibus, basi connatis, apice recurvis;* interiora *linearia, convexa, divaricata, supremi longitudine.* Labellum *carnosum, ungue viridi, suberecto, canaliculato, bicorni, disco reflexo, obcordato, fusco.* Columna *erecta, arcuata, semiteres, antice antè stigma parvum concavum alata.* Pollinia 4, *cereacea, glandulâ retinaculoque nullis.*

For this species of Liparis we are indebted to the researches of Sir Henry Chamberlain, who discovered it near Rio Janeiro, whence he sent it to the Horticultural Society in 1826. It is a tender stove herbaceous plant, growing freely in decayed wood, and flowering in July and August.

In the genus Liparis there is a section, consisting of the Cymbidium bituberculatum of Dr. Hooker, the Malaxis odorata of Willdenow, the Malaxis Rheedii of the same author, and the present plant, the species of which are extremely difficult to distinguish from each other. The present is particularly characterised by its short ovate

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* Perhaps derived from λιπαρὸς, unctuous, in allusion to the soft surface of the leaves of some species: M. Richard does not explain the name.

stems, or bulbs, as they are often called, its obcordate labellum, and long green bracteæ.

These species of Liparis have already been in part indicated at fol. 882 of this work, in which all the Isle of France and Madagascar species of M. du Petit Thouars are also taken up. We have, therefore, been surprised at finding the same species lately described with the same names, by our good friend M. Achille Richard, who was of course ignorant of the prior claim on our part to the names of the species he has distinguished.

J. L.

1176

BERBERIS* répens.

Creeping-rooted Berberry.

HEXANDRIA *MONOGYNIA.*

Nat. ord. BERBERIDEÆ.
BERBERIS.—Suprà, vol. 6. *fol.* 487.

B. *repens;* foliis pinnatis 2-3-jugis; foliolis subrotundo-ovatis opacis spinoso-dentatis glaucis, fasciculis diffusis, radice repente.

Frutex *humilis, ramosus, erectus.* Folia *sempervirentia, nunc ternata, sæpiùs bi-trijuga, cum impare; foliolis glabris, ovato-subrotundis, spinoso-dentatis, utrinque glaucis, nullo modo lucidis.* Racemi *terminales, fasciculati, diffusi, è gemmis squamaceis orti.* Flores *lutei.*

A native of the north-western part of North America, where it was originally found by the party accompanying Captains Lewis and Clarke in their expedition across the continent of America.

From seeds procured on that occasion plants were raised in America, which have lately been sold into Europe at the rate of twenty-five dollars each. One of these now growing in the Garden of the Horticultural Society afforded our figure and the opportunity of examining the species: it had been purchased of Mr. Michael Floy, Nurseryman at New York, under the name of Berberis aquifolium.

It appears, however, from the researches of Mr. Douglas, that this is not the true B. aquifolium. That species was described by Pursh, in part from an inspection of specimens in the collection of Captain Lewis, but chiefly from the Banksian Herbarium, in which it had been placed by Mr. Menzies, who discovered it on the

* *Berbérys,* according to Golius, as quoted by De Theis, is the Arabic name of the fruit.

north-west coast of America. From this last source the drawing in the *Flora Americæ Septentrionalis* was also taken. It is probable that the specimens in Captain Lewis's Herbarium were of the plant now under consideration; but it is also certain that those of Mr. Menzies belong to a very distinct species. Hence it seems that Pursh confounded two plants under the same name. That he intended to call Captain Lewis's plant B. aquifolium, there can be no doubt; but it is equally certain, that in consequence of his having figured Mr. Menzies' species, the world now applies the name to the latter. This being the case, it has become necessary to distinguish the former by a new name, which has been suggested by its singular property of creeping at the root; a habit peculiar to this species among Berberries.

A hardy, evergreen shrub, flowering in April; propagated, but with difficulty, by its creeping roots. *Branches* short, stiff, erect. *Leaves* evergreen, sometimes ternate, more frequently of two or three pairs, with an odd one; *leaflets* ovate, roundish, with spiny teeth, glaucous on each side, in no degree shining. *Racemes* terminal, fascicled, diffuse, arising out of scaly buds. *Flowers* yellow.

J. L.

1177

DÁPHNE* hýbrida.

Mule Daphne.

OCTANDRIA *MONOGYNIA.*

Nat. ord. Thymeleæ.
DAPHNE.—Suprà, vol. 10. *fol.* 822.

D. *hybrida;* foliis ovalibus coriaceis utrinque ramisque glabris, floribus sessilibus aggregatis, calycis tubo tomentoso: laciniis ovatis.

With this plant we are acquainted only through the information of Mr. William Rogers, Nurseryman, of Southampton, who gives the following account of it:—

"It is called by the French Florists Daphne Delphinium, but nothing is known of its origin. It approaches nearest to D. odora and oleæfolia, but differs from both of them in its leaves, and its darker, larger, and more fragrant flowers. It is in blossom almost all the year, and is stated to be quite hardy."

To us it appears intermediate between D. odora and D. collina. At all events it is a desirable plant, on account of its delicious fragrance.

J. L.

* Daphne is the Greek name of the Ruscus racemosus, or Alexandrian Laurel, into which the virgin Daphne was changed when she fled from the importunities of Apollo. Why the name has been applied to the shrubs now so called, it is not easy to say.

1178.

TÉLLIMA* grandiflóra.

Large-flowered Tellima.

DECANDRIA *DIGYNIA.*

Nat. ord. SAXIFRAGEÆ.

TELLIMA R. Brown.—*Calyx* conicus, inflatus, semisuperus, 5-dentatus. *Petala* 5, laciniata. *Stamina* decem. *Styli* 2. *Stigmata* angulata. *Capsula* semisupera, vestita, unilocularis, apice bivalvis, placentis parietalibus polyspermis.—— Herbæ (*Americæ septentrionalis*) *perennes, sempervirentes.* Folia *longè petiolata, lobata.* Flores *racemosi, herbacei.*

T. *grandiflora.* Douglas journ. ined.
Mitella grandiflora. *Pursh fl. Am. sept.* 1. 314. *Spreng. syst.* 2. 361.

Herba *sempervirens, acaulis, radicibus fibrosis, fasciculatis.* Folia *subrotundo-cordata, subquinqueloba, dentata, succulenta, plana, pilosiuscula, longè petiolata, petiolis villosis.* Scapi 2-*pedales, erecti, foliosi, pilosi, apice racemosi.* Racemi *secundi.* Bracteæ *minutæ, squamiformes.* Flores *herbacei, fœnum novum leviter olentes.* Calyx *semisuperus, parte adherente obconico pubescente; liberâ inflatâ, ovatâ, 5-dentatâ.* Petala *laciniata, inter dentes calycis inserta.* Stamina 10, *æqualia, inclusa, calycis fauce infrà petala inserta.* Discus *obsoletus.* Ovarium *semisuperum, ovatum, bilobum, placentis duabus parietalibus polyspermis in parte superiore tantum.* Styli *duo.* Stigmata *simplicia, subcapitata, angulata.* Capsula *membranacea, semisupera, unilocularis, apice bivalvis; placentis duabus parietalibus.* Semina *parva, fusca, testâ cartilagineâ extùs reticulata; embryo in axi albuminis carnosi, radiculâ hilo oppositâ.*

A hardy perennial plant, found originally by Mr. Menzies on the north-west coast of North America, and subsequently discovered by Mr. Douglas in the same country, in the midst of dense shady woods, growing among Hypnum, near streams, and sent to the Horticultural Society in 1826. Its flowers appear in April and May: they exhale a faint odour of new hay; and, although

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* Tellima appears to be an anagram of Mitella, the genus from which this is divided by Mr. Brown.

not strikingly beautiful, are extremely pretty when examined carefully.

The plant has the same habit as the common Heuchera americana, and requires the same kind of cultivation. It loves a shady peat border, in which it is protected from high winds, which are apt to injure its brittle stems and leaves. Mr. Douglas has observed it producing young plants from the base of the leaves; an economy we have not noticed in it in this country. With us it is propagated by seed and division of the roots.

Our drawing was made in the Chiswick Garden, in April of the present year.

Mr. Brown remarks of this genus, that it is near Heuchera and Vahlia of Thunberg, of which Oldenlandia pentandria of Retzius is an undoubted species.

J. L.

LONICÉRA* involucráta.

Involucred Lonicera.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CAPRIFOLIACEÆ.

LONICERA Linn. (*Xylosteon* Mœnch.) — *Calyx* superus, 5-dentatus, deciduus. *Corolla* infundibularis, limbo 5-partito erecto, basi saccata. *Stamina* 5. *Ovarium* triloculare, loculis omnibus pariter polyspermis. *Bacca* succosa, bilocularis.——Frutices *erecti* (Asiæ et Americæ temperatæ) floribus *roseis albisve, vix odoratis.*

L. *involucrata;* foliis oblongis obtusis in basi acuminatis subtùs pilosis, floribus didymis bracteis duabus magnis ovatis basi imbricantibus involucratis.

Xylosteum involucratum. *Richardson in Franklin's Appendix, p.* 733.

L. involucrata. *Hb. Banks. Spreng. syst.* 1. 759.

Frutex *demissus, 2-3-pedalis, ramis brevibus subtetragonis.* Folia *opposita, oblonga, obtusa, in basi acuminata, inde quasi obovata, suprà glabra, subtùs subpilosa.* Flores *didymi, sessiles intra involucrum è bracteis duabus conflatum, longè pedunculatum; pedunculis bracteatis.* Bracteæ *involucri, oppositæ, distinctæ, basibus imbricatis, ovatæ, subtùs subpilosæ, florum longitudine;* bracteolæ *duæ, exterioribus alternæ, ovariis arctè applicitæ, glandulosæ, subrotundæ, emarginatæ, quæque verosimiliter ex duabus connatis.* Flores *sessiles, didymi, in sinu bractearum.* Calyx *margo deciduus.* Corolla *infundibularis, extùs pilosa, basi saccata, limbo 5-partito, suberecto, inæquali, laciniâ cui saccus pertinet, anteriore majore.* Stamina 5, *æqualia, medio tubi inserta, laciniis limbi alterna;* filamenta *filiformia;* antheræ *lineares, innatæ, biloculares, longitudinaliter dehiscentes.* Ovarium *ovatum, liberum à proximo, bi-v. 3-loculare, ovulis appensis, cuique loculo quatuor v. quinque.* Stylus *filiformis, declinatus;* stigma *capitatum, obscurè bilobum, v. trilobum.* Bacca *nigra, 1-2-sperma, succosa, fœtens.*

This curious hardy shrub was sent, in 1824, to the Horticultural Society by William Williams, Esq., late

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* Adam Lonicer, a Frankfort Botanist, was born in 1528, and died in 1586. He published an ancient herbal, with corrections from the hand of Dorsten, and additions of his own, under the name of "Kräuterbuch," which appeared in folio at Frankfort in 1573: a second edition was published in 1737, by Balthazar John Ehrhart.

Governor of Moose Factory, in Hudson's Bay. It flowered in the Chiswick Garden, in May 1827, at which time the accompanying drawing was made.

In the Gardens it forms a low, rather scrubby, bush; and requires to be cultivated in peat earth, in a shady border, among other shrubs. If placed in an exposed situation it becomes scorched.

Dr. Richardson found this plant in the woody country of North America, extending from latitude 54° north to 64°. Mr. Douglas also observed it abundantly on the shores of Lake Winipeg: he likewise found a slight variety very common along the coast of the Pacific, and upon the banks of the Columbia, from 40° to 49° north latitude, growing in rocky situations, on the banks of streams, among gravel.

We have no means of ascertaining whether the Lonicera Ledebourii of Eschscholtz, collected by Chamisso at Port San Francisco, in New California, is the same as L. involucrata, as M. Schlechtendahl seems to suspect; that part of the Linnæa in which it is described not having reached us.

Many Botanists apply the name of Xylosteum to this group of Caprifoliaceæ, suppressing that of Lonicera altogether. But this appears inexpedient and unnecessary; it is better to apply the name of Lonicera to the erect species, with short flowers, a deciduous calyx, and a 3-celled ovarium, changing to a 2-celled berry; while Caprifolium is given to the twining species, the true Honeysuckles, with long tubular flowers, a persistent calyx, and a 3-celled ovarium, changing to a 1-celled berry.

J. L.

EUTOCA* multiflóra.

Many-flowered Eutoca.

PENTANDRIA *MONOGYNIA.*

Nat. ord. Hydrophylleæ. *R. Br.*

EUTOCA R. Br. — *Calyx* 5-partitus sinubus edentulis. *Capsula* polysperma. —— Herbæ *annuæ, pubescentes, eglandulosæ.* Folia *alterna, sæpiùs pinnatifida, nunc indivisa!* Racemi *terminales et quandoque è summis alis, secundi, ebracteati, novelli spiraliter revoluti.* R. Brown, in Franklin's Appendix, p. 764.

E. *multiflora;* foliis linearibus scabris, inferioribus tripartitis pinnatifidisve, racemis secundis multifloris, capsulis ovatis, stylo hirsuto.

E. multiflora. *Douglas journ. ined.*

Caulis *erectus, pubescens, ramosus.* Folia *pilosa, scabra, sessilia, superiora linearia, subintegerrima, inferiora tripartita vel pinnatifida.* Flores *in racemis elongantibus secundis dispositi, pallidè cærulei.* Calyx *inferus, 5-phyllus, sepalis linearibus pilosis; pilis simplicibus, acicularibus, non basi bulbosis.* Corolla *monopetala, hypogyna, campanulata, 5-loba, lobis erectis rotundatis, squamulis decem ad basin tubi per paria collateralibus conniventibus, lobis oppositis.* Stamina *imâ basi corollæ inserta, lobis corollæ alterna;* filamenta *filiformia, corollâ paulò longiora, pilis paucis brevibus subcapitatis conspersa.* Antheræ *ovatæ, cordatæ, anticæ, biloculares, longitudinaliter dehiscentes.* Pollen *sphæricum, glaberrimum.* Ovarium *ovatum, uniloculare, pilosum, placentis duabus parietalibus polyspermis.* Stylus *pilosus, bifidus.* Stigmata 2, *simplicia.* Capsula *ovata, calyce persistente brevior, subcompressa, acuta, pilosiuscula, polysperma, placentis duabus parietalibus;* semina *exactè ut in E. Franklinii, parva, oblonga, reticulata; embryo teres in axi albuminis carnosi.*

Common in dry places, in the most exposed sandy situations, in the north-west of North America, according to Mr. Douglas, by whom it was discovered, and sent to the Horticultural Society in 1826, in whose Garden at Chiswick the accompanying drawing was made in May 1828.

A hardy annual, of great beauty, flowering from April

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* Apparently from εὐτόκος, fruitful, in allusion to the number of seeds which it bears.

till July, and resembling some small Echium in appearance. It is well adapted to rock-work, but will not thrive in the ordinary highly-manured soil of a garden. It is propagated by seeds, which are produced sparingly.

This species appears to be very near the Eutoca Menziesii of Brown; but Mr. Douglas informs us that he has determined them to be distinct.

Stem erect, pubescent, branched. *Leaves* hairy, scabrous, sessile, the upper linear and nearly entire, the lower 3-parted or pinnatifid. *Flowers* arranged in lengthening unilateral racemes, pale blue. *Calyx* inferior, 5-leaved; *sepals* linear, shaggy, with acicular simple hairs, which are not bulbous at the base. *Corolla* monopetalous, hypogynous, campanulate, with 5 erect, rounded lobes, and 10 scales at the base of the tube, which are placed side by side in pairs opposite the lobes. *Stamens* inserted at the base of the corolla; *filaments* filiform, hairy. *Style* hairy.

J. L.

1181

BILLBÉRGIA* pyramidális; *var.* bicolor.

Two-coloured Pyramidal Billbergia.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Bromeliaceæ.
BILLBERGIA. — *Suprà, vol.* 13. *fol.* 1068.

B. *pyramidalis;* caule erecto: bracteis magnis spathaceis coloratis, spicâ subcapitatâ ebracteatâ.
Billbergia pyramidalis. *Lindl. suprà, vol.* 13. *fol.* 1068, *in notâ.*
Bromelia nudicaulis. *Suprà, vol.* 3. *fol.* 203.
Bromelia pyramidalis. *Bot. mag.* 1732.
β. bicolor; petalis obtusis bicoloribus, foliis magis acuminatis.

This appears to be a variety distinct from that represented at fol. 203 of this work, from which it differs in the more obtuse figure of the petals, and in their colour; the leaves also appear to be more taper-pointed.

It is a native of some part of South America, and highly deserving of cultivation on account of the great beauty of its flowers.

Our drawing was made in April 1827, in a stove in the Nursery of Mr. Samuel Brookes, of Ball's Pond, Islington.

J. L.

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* Named by Thunberg after Gustavus John Billberg, a Swedish Botanist, whom he calls "Botanicus longè celeberrimus, Floræ Suecicæ elegantissimæ Auctor meritissimus."

CLIVIA* nobilis.

Scarlet Clivia.

HEXANDRIA *MONOGYNIA.*

Nat. ord. AMARYLLIDEÆ.

CLIVIA. — *Perianthium* tubulosum, sexpartitum, deciduum, laciniis imbricantibus; exterioribus paulò brevioribus. *Stamina* sex, æqualia, perianthio basin versùs inserta; *filamenta* subulata, subinclusa; *antheræ* versatiles. *Ovarium* 3-loculare polyspermum. *Fructus* baccatus, indehiscens, monospermus. *Semen* carnosum; subrotundum. —— Herba (*Capensis*), radicibus *fasciculatis,* foliis *distichis,* floribus *umbellatis pendulis.* Scapo *plano-convexo !*

C. nobilis.

Radices *carnosi, fasciculati.* Folia *disticha, coriacea, atroviridia, ligulata, basi vaginantia, apice retusa obliqua, margine scabra.* Scapus *erectus, plano-convexus, marginatus, versùs fastigium sulcatus.* Flores *circiter* 48 *v.* 50, *longè pedunculati, umbellati, penduli.* Perianthium *tubulosum, clavatum, deciduum, laciniis luteo-coccineis, apice virescentibus, obtusis, duplici ordine imbricatis, versùs basin connatis, exterioribus paulò brevioribus, Lachenaliæ modo.* Stamina 6, *fauce tubi inserta, æqualia;* filamenta *glabra;* antheræ *parvæ, ovales, viridi-luteæ, versatiles.* Ovarium *inferum, luteo-viride, 3-loculare, polyspermum, sphæricum, ventricosum;* ovula *plurima versùs basin axeos inserta;* stylus *filiformis;* stigma *subtrilobum.* Fructus *baccatus, indehiscens, ruber, sæpiùs, loculis* 2, *ovulisque plurimis abortientibus, monospermus; apice perianthio deciduo cicatrizatus.* Semen *unicum, ascendens,* (*maturum non vidi*), *glaberrimum, hyalinum, ovale;* hilo *parvo suprabasilari;* foramine *basilari;* raphe *brevi, elevatâ.* Testa *junior minutissimè areolata;* albumen *copiosum.* Embryo......

This noble plant is supposed to have been one of the discoveries of Mr. Bowie at the Cape of Good Hope,

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* We have named this genus in compliment to her Grace the Duchess of Northumberland, to whom we are greatly indebted for an opportunity of publishing it. Such a compliment has long been due to the noble family of Clive; and we are proud in having the honour of being the first to pay it.

from some of the inner districts of which colony it was probably procured. The plant from which our drawing was made, flowered for the second time in July last, in the princely Garden of his Grace the Duke of Northumberland, at Syon House, and was communicated to us by Mr. Forrest, to whom we are indebted for several observations upon its habit and characters.

At first sight it has so much the appearance of a Cyrtanthus that it may easily be mistaken for one, especially if the detached flowers only are seen. But upon a more minute examination, it will be found that it is not only not referable to that genus, but that it is actually doubtful whether it does not belong to a distinct natural order. In the first place, it does not form a bulb, an almost indispensable character of Amaryllideæ, from which there is but one other variation hitherto known, namely in Doryanthes. In the second place, the fruit is not a dehiscent dry capsule, but fleshy and indehiscent; and, thirdly, the seeds are not numerous, compressed, and membranous, but solitary, round, and fleshy. It is, therefore, obviously distinct from Cyrtanthus; and there is no other Amaryllideous genus to compare with it, except Eustephia, the fruit of which is still unknown, but which is peculiarly characterised by its 3-toothed filaments, and which is probably not far removed from Phycella.

Perhaps the real affinity of this plant cannot at present be determined: to us it appears most closely allied to Hæmanthus, the bulbs of which are very imperfect.

A greenhouse plant, not appearing to require particular care in its cultivation, and propagating either by seeds or suckers.

Roots fleshy, fascicled. *Leaves* distichous, coriaceous, dark green, strap-shaped, sheathing at the base, retuse and oblique at the apex, rough at the margin. *Scape* erect, plano-convex, bordered, furrowed towards the summit. *Flowers* from 48 to 50, on long stalks, pendulous, arranged in an umbel. *Perianth* tubular, clavate, deciduous; the segments yellowish scarlet, greenish at the apex, obtuse, imbricated in a double row, cohering towards the base, the outer rather shorter than the inner, like those of a Lachenalia. *Stamens* 6, inserted in the orifice

of the tube, equal; *filaments* smooth; *anthers* small, oval, greenish yellow, versatile. *Ovarium* inferior, greenish yellow, 3-celled, many seeded, round, ventricose. *Ovula* numerous, inserted towards the base of the axis; *style* filiform; *stigma* somewhat 3-lobed. *Fruit* berried, indehiscent, red, generally, in consequence of the abortion of two cells and most of the ovula, one-seeded, marked at the top by the scar of the fallen perianth. *Seed* single, ascending, (only seen unripe), very smooth, transparent, oval; *hilum* small, above the base; *foramen* in the base; *raphe* short, raised. *Testa*, when young, marked with very minute areolations; *albumen* abundant. *Embryo* ......

J. L.

BRODIǼA* grandiflóra.

Large-flowered Brodiæa.

TRIANDRIA *MONOGYNIA.*

Nat. ord. Hemerocallideæ.

BRODIÆA Smith.—*Perianthium* campanulatum, sexfidum, persistens; squamis tribus ad faucem laciniis exterioribus oppositis, nunc antheriferis. *Squamæ* 3, carnosæ, hypogynæ. *Stamina* 3, fauce inserta, squamis faucis alterna; *antheræ* basi bilobæ. *Stylus* ovario continuus, subulatus; *stigma* trilobum. *Capsula* perianthio vestita, obovata, pedicellata, 3-locularis, loculicidò trivalvis. *Semina* cuique loculo 4 v. 5, nigra, obovata, striata, peltata, *testâ* membranaceâ. *Chalaza* depressa —— Flores umbellati.

B. *grandiflora;* floribus pedunculatis corymbosis, squamis planis integerrimis membranaceis.

B. grandiflora. *Smith in Linn. trans. vol.* 10. *p.* 2. nec *Nuttallii* nec *Purshii.*

Hookera coronaria. *Salisbury Paradisus Lond. t.* 98.

Radix *parvus, bulbosus.* Folia *radicalia, patentia, linearia, acuminata, canaliculata.* Scapus *erectus, teres, gracilis, pedalis v. brevior.* Flores *umbellati, corymbosi, longè pedunculati, spathâ brevi, oligophyllâ, scariosâ.* Pedunculi *gemini ad senos septemve usque, erecti, floribus longiores.* Perianthium *campanulatum, sexfidum, amœnè cæruleum, tubo 6-striato, limbo patente longiore, laciniis oblongo-linearibus obtusiusculis, exterioribus angustioribus.* Squamæ *tres, albidæ, ligulatæ, integerrimæ in fauce tubi, laciniis angustioribus oppositæ.* Stamina 3, *in fauce tubi inserta, squamarum longitudine, (in icone pictoris incuriâ omissa);* filamenta *plana;* antheræ *lineares, obtusæ, longitudinaliter dehiscentes, basi sagittatæ, lobis incurvis.* Ovarium *obovatum, 3-gonum, 3-loculare, polyspermum, in stylo persistente marcescente acuminatum.* Stylus *subulatus.* Stigma *trilobum.* Capsula *perianthio persistente tecta, trilocularis, semitrivalvis, oligosperma; dehiscentiâ loculicidâ.* Semina *aterrima, obovata, irregulariter compressa, apice obtuso foveata (sedes chalazæ), raphe tenui à mediâ facie in foveam currente, semina ideo peltata, hilo obsoleto.* Testa *minutissimè parallelè striata, membranacea, albumini carnoso arctissimè adhærens.* Embryo *in axi albuminis, extremitate radiculari apicem acutum seminis attingente, cotyledonari foveam.*

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* Named after James Brodie, Esq., of Brodie, in North Britain — a gentleman highly commended by Sir James Smith for his scientific attainments.

Roots of this charming little bulbous plant were sent by Mr. Douglas from North-west America to the Horticultural Society in 1826, and flowered in the Chiswick Garden in July of the present year.

It is a beautiful hardy plant, growing freely in a peat border, and producing seeds in small quantities.

The squamæ of the orifice of the perianthium are occasionally furnished with perfect anthers, thus indicating their true nature; and in B. congesta they are always so. The three hypogynous scales are remarkable.

J. L.

VERBÉNA* Melíndres.

Scarlet Buenos Ayres Verbena.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. VERBENACEÆ.
VERBENA.—Suprà, vol. 4. fol. 294.

V. *Melindres;* caule procumbente piloso, foliis oblongo-lanceolatis grossè serratis calycibusque hispidis, floribus corymbosis, laciniis corollæ omnibus emarginatis.

V. Melindres. *Gillies MSS.*

Herba *diffusa, perennis? caulibus teretibus, ascendentibus, pilosis.* Folia *opposita, oblongo-lanceolata, grossè serrata, in petiolo brevi attenuata, utrinque præsertim ad venas hispida.* Flores *in spicâ corymbosâ dispositi, pedunculati.* Bracteæ *hispidæ, subulatæ, calyce breviores.* Calyx *hispidus.* Corolla *calyce longior, pulchrè coccinea; laciniis planis, oblongis, emarginatis, inferiore majore.*

This and a number of similar undescribed Chilian and Buenos Ayrean species of Verbena, have long been familiar to us in the form of dried specimens; but we have never before had an opportunity of seeing it alive. The plant from which the accompanying drawing was made was communicated on the 20th of June last by Mr. Harrison, Gardener to the Earl of Egremont, in whose Garden at Petworth it then flowered in great beauty for the first time. It is a native of the plains of the Pampas of Buenos Ayres, where we learn from our friend Dr. Gillies it is very common: it is also found in the provinces of Cordova and San Luis.

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* Said by De Theis to be an alteration of *ferfaen*, the Celtic name of the plant. Melindres is the vernacular appellation of this species in the province of Buenos Ayres.

Little can at present be said of the cultivation or habits of this plant: it appears to be a perennial, striking freely from cuttings of the ripened stems, and flowering in abundance from June to September. Whether it will bear our winters without protection, is to be doubted; it will probably require the covering of a frame at that season, to be turned into the open border during the summer. The scarlet of the flowers rivals that of the Lobelia splendens.

Stems spreading, round, ascending, hairy. *Leaves* opposite, oblong-lanceolate, coarsely serrated, tapering into a short petiole, hispid on each side, especially at the veins. *Flowers* arranged in a corymbose stalked spike. *Bracteæ* hispid, subulate, shorter than the calyx. *Calyx* hispid. *Corolla* longer than the calyx, bright scarlet; the segments flat, oblong, emarginate, the lower larger than the others.

J. L.

M. Hart. del. ... by J. Ridgway 169 Piccadilly Oct 1/28 S. Watts sc.

SÓPHORA* velutína.

Velvety Bastard Sophora.

DECANDRIA *MONOGYNIA.*

Nat. ord. Leguminosæ. § *Sophoreæ.*

SOPHORA Linn. — *Calyx* 5-dentatus, basi campanulatâ v. subattenuatâ. *Petala* carinalia sæpiùs apice concreta. *Legumen* moniliforme, apterum, polyspermum. —— Arbores frutices *aut* herbæ, foliis *impari-pinnatis, sæpiùs exstipulatis,* racemis *terminalibus simplicibus paniculatisve.* Dec. prodr. 2. 95.

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§ Disemæa. *Vexillum bifidum, petala imbricata, calyx 5-dentatus æqualis.*

S. *velutina;* fruticosa, foliolis 23 ellipticis mucronatis, utrinque ramis pedunculisque velutinis, racemis cylindricis terminalibus, petalis imbricatis: vexillo bifido.

Caulis *fruticosus, densè velutinus.* Folia *exstipulata, impari-pinnata, velutina, utrinque concolora;* foliola 23, *elliptica, mucronata.* Racemi *terminales, cylindracei, foliorum ferè longitudinis, villosi.* Bracteæ 0, *v. citissimè deciduæ.* Calyx *velutinus, tubo brevi, turbinato, persistente, limbo campanulato, membranaceo, 5-dentato, dentibus subæquilongis, 4 superioribus subrotundo-ovatis, supremis paululum connatis, inferiore acuminato.* Petala *fauce tubi calycis inserta, libera, imbricata.* Vexillum *lineari-oblongum, bifidum, incumbens, basi carnosum, tomentosum.* Alæ *falcatæ, obtusæ, ascendentes, auriculatæ;* carina *paulò brevior, abruptè unguiculata, obtusa.* Stamina 10, *fauce tubi calycis inserta;* filamenta *distincta, æqualia, basi latâ tomentosâ leviter et inæqualiter monadelpha.* Antheræ *parvæ, oblongæ.* Ovarium *stipitatum, lanatum, lineare, polyspermum, in stylo glabro, ascendente, attenuatum.* Stigma *simplex.* Legumina *erecta, teretia, moniliformia, utrinque acuminatissima, velutina,* 1-3-*sperma.*

A fine greenhouse shrub, which well deserves a trial as a hardy plant: it is a native of Nipal, and was raised some years since from seeds received from Mr. Clark by

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* A slight alteration of Sophera, a name employed by Alpinus for Cassia Sophera.

Messrs. Whitley and Co., in whose Nursery our drawing was made in June last.

Although we have referred it to Sophora, we are by no means satisfied that it is a genuine species of that genus, from which it differs in its equal, 5-toothed calyx, imbricated petals, and bifid vexillum. It is not, however, worth while distinguishing it at present, nor perhaps at all, unless other species should be discovered agreeing with it in those characters.

We should suspect S. glauca, found by Leschenault upon the Nilgherry range, to be nearly related to the present plant, if it were not to be expected that the remarkable characters existing in the petals and calyx of this would have been noticed by M. Decandolle, had they been visible in that species.

Could this be naturalised in our Shrubberies, it would be a most desirable addition to our collections of hardy plants: it would no doubt bud readily upon the common Sophora Japonica.

J. L.

Piccadilly

GAILLÁRDIA* aristáta.

Whole-coloured Gaillardia.

SYNGENESIA *FRUSTRANEA.*

Nat. ord. Compositæ. Corymbiferæ *Juss.* — Heliantheæ Helenieæ *Cassini.*

GAILLARDIA Fougeroux. — *Involucrum* polyphyllum, imbricatum, squamis foliaceis. *Flosculi radii* ligulati 3-dentati neutri; *disci* tubulosi, persistentes, basi herbacei subsolidi, dentibus extùs barbatis, centro masculi, ad ambitum hermaphroditi. *Stigmata* subulata barbata basi pedicelliformia glabra. *Fructus* villosus turbinatus, teres. *Pappus* paleaceus. *Receptaculum* conicum paleaceum.

G. *aristata;* foliis radicalibus spatulatis dentatis, caulinis oblongo-linearibus sessilibus integerrimis, squamis involucri acuminatis disco longioribus, radio unicolore.

G. aristata. *Pursh. fl. am. sept.* 2. 573.

G. bicolor *β.* *Nuttall gen. am.* 2. 175.

Perennis, *radicibus fibrosis.* Folia *ferè sempervirentia;* radicalia *spatulata, in petiolum longum attenuata, subdentata, undique pilis longis mollibus vestita; pili septis plurimis intùs divisi;* caulina *sessilia, oblonga, integerrima, acuta, basi paululum amplexicaulia.*—Obs. *Folia radicalia quandoque, sed rariùs pinnatifida.* Caules *erecti, teretes, striati, appressè pilosi.* Capituli *solitarii, longissimè pedunculati, erecti.* Involucrum *imbricatum, polyphyllum, squamis foliaceis squarrosis, demùm reflexis, ciliatis, interioribus multò angustioribus.* Flosculi *radii* 15, *magni, cuneati, tridentati, aurantiaco-lutei, neutri; disci purpurei, tubulosi, campanulati, basi brevi, teretes, virides, solidi; lobis* 5, *acuminatis, barbatis; diù persistentes, et demùm viridescentes; centri masculi, peripheriæ hermaphroditi v. fœminei.* Ovarium *turbinatum, villosum;* pappus *paleaceus, aristatus.* Antheræ *apice appendiculatæ, lobis basi acutis.* Stylus *filiformis, glaber.* Stigmata *purpurea, subulata, barbata, intùs sulcata, pedunculata, pedunculo glaberrimo.* Fructus *turbinatus, teres, truncatus, basi villosus, apice glaber.* Receptaculum *conicum, paleis subulatis tectum.*

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* So called by M. Fougeroux de Bondaroy, after his friend M. Gaillard. Botanists usually write the word Galardia, an obvious inaccuracy, the origin of which is said by Cassini to be chargeable upon Lamarck.

A handsome hardy perennial, found in the north-west of North America by Mr. David Douglas, and by him sent, in 1827, to the Horticultural Society, in whose Garden at Chiswick our drawing was made in July last. It flowers from June to October, and is propagated by seeds or division of the roots.

It is, no doubt, the G. aristata of Pursh, which Mr. Nuttall considers a mere variety of G. bicolor. It appears to us, however, to be sufficiently distinct as a species, especially as it does not lose its wild features when cultivated. It is altogether a larger plant, more hardy, and the rays are whole-coloured; not to speak of other important differences.

A nearly evergreen perennial, with fibrous roots. *Leaves of the root* spatulate, tapering down into a long petiole, somewhat toothed, covered on both sides with numerous soft hairs, which are divided internally by several partitions; *of the stem* sessile, oblong, very entire, acute, very slightly amplexicaul at the base. The radical leaves are occasionally pinnatifid. *Stems* erect, taper, striated, with close-pressed hairs. *Heads* solitary, on very long stalks, erect. *Involucrum* imbricated, many leaved; the scales foliaceous, squarrose, finally reflexed, ciliated, the innermost much the narrowest. *Florets of the ray* 15, large, cuneate, 3-toothed, yellowish orange, neuter; *of the disk* purple, tubular, campanulate, with a short, green, taper, solid base; the lobes 5, acuminate, bearded; the florets are persistent almost until the ripening of the fruit, and change to a greenish colour; those of the centre are male, those towards the circumference female or hermaphrodite. *Ovarium* turbinate, villous; *pappus* paleaceous, aristate. *Anthers* with a little appendage at the apex, and acute lobes at the base. *Style* filiform, smooth. *Stigmata* purple, subulate, bearded, furrowed along the middle, with a smooth stalk. *Fruit* turbinate, taper, truncate, villous at the base, smooth at the apex. *Receptacle* conical, covered with subulate paleæ.

J. L.

W. Hart del. Pub by J. Ridgway 169 Piccadilly Oct 1/28. J. W. sc.

COTONEASTER* microphylla; *var.* Uva Ursi.

Bearberry-leaved Nepal Cotoneaster.

ICOSANDRIA *DI-TRIGYNIA.*

Nat. ord. POMACEÆ. *Lindl.*
COTONEASTER.—Suprà, vol. 13. *fol.* 1114.

C. *microphylla;* foliis oblongis obtusis lucidis coriaceis, petalis patentibus. *Suprà, l. c.*
β. Uva ursi; foliis majoribus, floribus subternis, caule vegetiore.

For this distinct variety we are indebted to Mr. John Miller, of the Nursery, Bristol, by whom specimens were sent to us in the course of the last spring. It differs from the genuine Cotoneaster microphylla in being a plant of a more vigorous growth, having somewhat larger and flatter leaves, and bearing flowers more frequently in twos or threes than singly.

Like that species, it is a hardy evergreen shrub, of great beauty, striking readily from cuttings or layers, and flowering in April and May. To what height either may attain, we have no means of judging. At present the original species does not exceed 2 feet in any place in which we have seen it: that now represented appears to have a tendency to acquire a stature of 3 or 4 feet.

J. L.

* A sort of barbarous word, signifying Quince-like. The Quince was called *cotonea* by Pliny; and *aster,* a corruption of *ad instar,* is used occasionally to express similitude.

AMARŸLLIS* acumináta; var. *longipedunculata.*

Long-stalked pulverulent Amaryllis.

HEXANDRIA *MONOGYNIA.*

Nat. ord. AMARYLLIDEÆ.
AMARYLLIS.—Suprà, vol. 1. fol. 23.

A. *acuminata*; umbellâ 4-5-florâ; foliis loratis pruinosis, perianthio ringente subpatente: tubo brevissimo, laciniis rhomboideis acuminatis apice undulatis, scapo glauco.
A. acuminata. *Suprà, vol. 7. fol. 534.*
A. pulverulenta. *Herbert in Bot. mag.*
Var. longipedunculata; umbellâ 5-florâ, pedunculis elongatis horizontalibus.
A. acuminatæ veræ *valdè affinis; tantùm differt* foliis *angustioribus,* scapo *evectiore,* pedunculis *longioribus, magis patentibus, et, si error nullus irrepserit,* patriâ *Mexicanâ, nec Bonariense.*

For this very fine variety of A. acuminata we are indebted to A. F. Mornay, Esq., of Ashburton House, Putney, by whom it was found near San Pablo Quatro-Venados, in the state of Oaxaca, in Mexico. The bulb was introduced some years ago: our drawing was made in March 1827.

It differs from the well-known A. *acuminata* in being more robust in its mode of growth, having narrower leaves, and a more spreading umbel, with longer stalks to the flowers. It is easily cultivated in a cool greenhouse.

J. L.

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* Amaryllis was a country girl whose charms were celebrated by Virgil. Botanists have shewn their gallantry by giving her name to a genus of flowers, whose beauty will not suffer by comparison with the fairest dames of Latium.

SERÁPIAS* cordígera; var. *longipétala.*

Pale heart-lipped Serapias.

GYNANDRIA *MONANDRIA.*

Nat. ord. Orchideæ. § *Ophrydeæ.*

SERAPIAS Linn. — *Pollinia* 2 granulata, *caudiculis* duabus *glandulæ* unicæ affixis, cucullo communi inclusæ. *Anthera* antica, erecta, persistens. *Stigma* subrotundum, concavum. *Columna* semiteres, ultrà antheram in cuspide producta. *Labellum* trilobum, lobis lateralibus erectis, medio dependente acuminato. *Sepala* acuminata, conniventia, subæqualia.——Herbæ *terrestres* (Europæ); radicibus *tuberosis;* caulibus *foliosis;* spicâ *simplici* paucíflorâ.

S. *cordigera;* bracteis coloratis floribus longioribus, labello basi bicalloso.
α. *labello atro-fusco.*
S. cordigera. *Linn. sp. pl.* 1345. *Bot. rep.* 475, &c.
Helleborine cordigera. *Sebast. rom. pl. fasc.* 1. *p.* 13. *t.* 4. *f.* 2. *Tenore fl. nap.* 2. 315.
β. longipetala; *labello pallido.*
Helleborine longipetala. *Tenore fl. nap. prodr. p.* 53. *Sebast. fl. rom. prodr.* 312.
Helleborine pseudo-cordigera. *Sebast. rom. pl. fasc.* 1. *p.* 14. *t.* 4. *f.* 1.
Serapias lancifera. *St. Amans fl. agen. p.* 378. *D'Urville in act. Linn. par.* 1. 377.

We cannot agree with the Italian and other Botanists quoted above, in distinguishing this plant from S. cordigera, to which it seems to us to belong in every essential respect. The paleness of the flowers is, indeed, the only character that can be readily seized to distinguish them.

It is a beautiful spring flower, common about Rome in very dry soil. It is also a native of the neighbourhood of Agen, where it was found by M. de St. Amans; and

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* So called after the Egyptian divinity Serapis.

Tenore speaks of it as abounding at the foot of Vesuvius, near Ottojano, Boscotrecase, Mauro, Mortelle, Portici, and elsewhere, always in very dry meadows.

Our drawing was made in April 1827, in the Garden of the Horticultural Society, where it had been received from Signor Mauri, in the same year

J. L.

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Pub. by J. Ridgway 169 Piccadilly Nov 1. 1828.

S. W.

ADENOTRÍCHIA* amplexicaúlis.

Stem-clasping Adenotrichia.

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. § *Corymbiferæ.*

ADENOTRICHIA.—Involucrum duplex, polyphyllum, exterius squarrosum squamis subulatis glandulosis, interius campanulatum squamis canaliculatis erectis, extùs glandulosis, intùs glabris. *Flosculi radii* ligulati, subintegri, fœminei; *disci* filiformes, tubulosi, hermaphroditi. *Antheræ* muticæ. *Stylus* filiformis; *stigmata* patentia, linearia, apice truncata stuposa. *Fructus* glabri, teretes, striati. *Pappus* pilosus, scabriusculus. *Receptaculum* nudum.——Herbæ *glandulosæ;* foliis *simplicibus glandulosis alternis;* floribus *luteis.*

Adenotrichia amplexicaulis.

Caulis *herbaceus, erectus, subramosus, 2-pedalis, striatus, glanduloso-viscidus, pilosus.* Folia *simplicia, sessilia, amplexicaulia, ovato-lanceolata, subpinnatifida, glandulosa, pallidè viridia, utrinque glandulosa.* Capituli *corymbosi, radiati.* Pedunculi *subbracteolati, densè glandulosi.* Involucrum *duplex, hemisphericum;* exterius *serie simplici polyphyllum, squamis subulatis, squarrosis, glandulosis, apice quandoque bifidis;* interius *serie simplici campanulatum, squamis erectis, canaliculatis, apice subsquarrosis, intùs glabris, extùs glandulosis,* Flosculi radii *fœminei, ligulati, integri, v. apice subtrifidi, tubo longo filiformi.* Flosculi disci *hermaphroditi, filiformes, tubulosi, limbo parvo, 5-dentato, erecto.* Stamina *basi mutica.* Receptaculum *glabrum.* Styli *filiformes.* Stigmata 2, *linearia, patentia, apice truncata, stuposa.* Fructus *glabri, striati.* Pappus *pilosus, scabriusculus.*

A native of Chile, whence it was brought to the Horticultural Society by Mr. James M'Rae, in 1826. By him it was found at Cumbre, a pass in the Andes, flowering in November 1825. It is a greenhouse herbaceous plant, with a pretty appearance, and flowers with us in May. Our drawing was made in the Garden of the Horticultural Society, in 1827.

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* From ἀδὴν, a gland, and θρὶξ, hair, in allusion to the intermixture of hairs and glands for which the plant is remarkable.

In the confusion that exists throughout the whole of Compositæ, it is no easy task to say whether a genus is published or unpublished. The present may have made its appearance in some work with which we are unacquainted, or in some place that we have not succeeded in discovering. We believe, however, that it is new. It differs from all the Corymbiferous genera with hairy pappus, in having an outer squarrose involucrum, and an inner one formed of a number of erect, channelled scales. Its nearest affinity is probably Munnozia, from which it differs in the scales of the involucrum not being trifid at the extremity, and in its alternate leaves.

Stem herbaceous, erect, somewhat branched, about two feet high, striated, covered with hairs and viscid glands. *Leaves* simple, sessile, stem-clasping, ovate-lanceolate, somewhat pinnatifid, pale green, glandular on each side. *Heads* corymbose, radiant. *Peduncles* with a few bracteæ, densely glandular. *Involucrum* double, hemispherical; the outer in a single row, consisting of numerous subulate, glandular, squarrose scales, occasionally bifid at the apex; the inner campanulate in a single row, consisting of several erect channelled scales, somewhat squarrose at the apex, smooth on the inside, glandular on the outside. *Florets of the ray* female, ligulate, entire, or somewhat trifid at the apex, with a long filiform tube. *Florets of the disc* hermaphrodite, filiform, tubular, with a small, 5-toothed, erect limb. *Stamens* without appendages at the base. *Receptacle* smooth. *Style* filiform. *Stigmas* 2, linear, spreading, truncate and shaggy at the apex. *Fruit* smooth, striated. *Pappus* hairy, roughish.

J. L.

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CÝTISUS* multiflórus.

Many-flowered Cytisus.

DIADELPHIA *DECANDRIA.*

Nat. ord. Leguminosæ. § *Loteæ.*
CYTISUS.—Suprà, vol. 2. fol. 121.

C. *multiflorus;* caulibus erectis, ramis elongatis teretibus: junioribus villosis, foliolis oblongis basi attenuatis subtùs villosis utrinque concoloribus, floribus subternatis, pedicellis petiolis subæqualibus, vexillo emarginato undulato.

C. elongatus; β. multiflorus. *Dec. prodr.* 2. 155.

Differt C. elongato, foliis *subtùs villosis, concoloribus, nec appressè pilosis, argento micantibus;* pedunculis *petiolis longioribus v. æqualibus, nec multò brevioribus;* vexillo *emarginato, undulato, quodammodo lacero, nec obcordato, plano, integerrimo; denique,* floribus *majoribus, ternis quaternisve, nec subsolitariis, rarò ternis.*

We quite agree in the opinion expressed by Dr. Besser in Decandolle's *Prodromus,* that the C. elongatus of many Gardens is a species distinct from that of Waldstein and Kitaibel. Of the latter we have wild specimens from the neighbourhood of Pest, which entirely agree with the garden plant figured by Watson in his *Dendrologia Britannica,* from Messrs. Whitley's Nursery; this, therefore, is to be considered the true C. elongatus. That which is now represented is better known in the Gardens of the continent than in this country. The plant from which our drawing was made, in May 1827, was growing in the Garden of the Horticultural Society, where it had been raised from seeds received from Professor Jacquin.

It is a very beautiful hardy border-shrub, remarkable

* Pliny says, that Cytisus was so called because it was a native of Cythnos, one of the Cyclades. His Cytisus was the Medicago arborea.

for the profusion of bright yellow flowers with which its long slender branches are laden. It does not grow above 2 or 3 feet high, and is easily propagated by layers. Its native country is unknown.

The differences that exist between this and C. elongatus are as follow: — The *leaves* are villous and green beneath, not closely downy and silvery; the *peduncles* are longer than the petioles or as long, and not much shorter; the *vexillum* is ragged, emarginate, and wavy, not obcordate, flat, and entire; and, finally, the *flowers* are much larger, and always produced in threes or fours, and not usually solitary, or at the utmost produced in threes.

J. L.

DELPHINIUM* Menziésii.

Mr. Menzies's Larkspur.

POLYANDRIA *TRIGYNIA.*

Nat. ord. Ranunculaceæ.

DELPHINIUM Linn. — *Calyx* coloratus, deciduus, 5-sepalus, sepalo superiore basi in calcar cavum producto. *Petala* 4, interdum inter se coalita, 2 superiora basi in appendices intra calcar contentas (calcar internum) producta. *Stamina* 00. *Ovaria* 1-5, sæpiùs 3. *Capsulæ* totidem, distinctæ, univalves, folliculares. *Semina* 00, arido-baccata. —— Herbæ radice *annuâ exili, aut perenni subfasciculatâ donatæ.* Caules *erecti, ramosi.* Folia *petiolata, caulina palmatim multifida.* Flores *racemosi, sæpiùs cærulei, aut albi rosei et variantes purpurei, in unicâ specie flavi.* Bracteæ 3, *ad singulum pedicellum,* 1 *sub basi* (bractea), 2 *secus pedicellum* (bracteolæ) *sæpiùs oppositæ, nunc ad basin ut in* D. Staphisagriâ, *nunc in medio pedicelli ut in* D. Requienii, *nunc circà apicem ut in* Delphinastris. *Dec. syst.* 1. 340.

Sect. III. Delphinastrum.

Ovaria 3, *interdum* 5. *Calcar elongatum, interius dipetalum. Petala* 4, *libera,* 2 *inferiora stipitata, limbo intùs barbato, in unicâ specie integro, sæpissimè bifido. Bracteæ* 1 *sub pedicello,* 2 *secus pedicellum sæpissimè oppositæ flori contiguæ. Radices perennes.* Dec. l. c.

D. *Menziesii;* petiolis basi vix dilatatis, foliis 5-partitis lobis trifidis linearibus integris, bracteis trifidis, radice grumosà. *Dec. l. c. prodr.* 1. 54.

Caulis *erectus, simplex, teres, subflexuosus, pubescens.* Folia *longè petiolata, multifida, pilosa, laciniis linearibus furcatis, petiolis filiformibus, lamina plus quàm duplò longioribus.* Racemus *terminalis, simplex,* 6-8-*florus.* Pedunculi *pubescentes, floribus longiores;* bracteolis *duabus subulatis, sub flore oppositis.* Flores *intensè purpureo-cærulei.* Sepala *extùs medio pubescentia, calcare recto, obtuso, subulato, corrugato breviora.*

A beautiful hardy perennial, native of the north-west coast of North America, where it was originally found by Mr. Menzies, and more recently by Mr. Douglas. Our

* So called because its flower resembles the fanciful figures of the dolphin, Δελφὶν.

drawing was made in June last, in the Garden of the Horticultural Society, where it had been raised from Mr. Douglas's seeds.

It is a very neat upright plant, with a nearly simple stem, and very deep purple flowers. It grows readily in common garden soil, and is propagated by division of the roots.

Stem erect, simple, round, somewhat flexuose, pubescent. *Leaves* on long stalks, divided into several linear, forked, downy segments; the petioles filiform, more than twice as long as the lamina. *Raceme* terminal, simple, of from 6 to 8 flowers. *Peduncles* downy, longer than the flowers; *bracteolæ* 2, opposite, subulate, placed under the flowers. *Flowers* a deep bluish purple. *Sepals* downy externally in the middle, shorter than the straight, subulate, obtuse, shrivelled spur.

J. L.

1193.

CONANTHÉRA* campanulata.

Bell-flowered Conanthera.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Asphodeleæ.

CONANTHERA Fl. Peruv. — *Perianthium* semisuperum, laciniis patentibus v. reflexis, alternis ciliatis. *Stamina* basi perianthii inserta, antheris apice appendiculatis in cono conniventibus. *Ovarium* semi-inferum, 3-loculare, oligospermum; ovulis placentæ carnosæ affixis ascendentibus. *Capsula* pisiformis, 3-locularis, 3-valvis; seminibus paucis rotundis.

C. *campanulata;* foliis lineari-lanceolatis humifusis, perianthio campanulato: laciniis obtusis patentibus, alternis minoribus.

C. bifolia. *Sims in Bot. mag. fol.* 2496, not of the Flora Peruviana.

C. campanulata. *Lindley in Hort. trans.* 6. 283 (1826). *Hooker's exot. flora,* 3. *t.* 214 (1827).

Cummingia campanulata. *D. Don.*

Herba *bulbosa, palmaris, glaber.* Folia *linearia, acuminata, diffusa, scapi longitudine.* Scapus *teres, laxus, paniculatus.* Bracteæ *subulatæ.* Flores *nutantes, pedicellis inarticulatis.* Perianthium *campanulatum, semisuperum, limbo patente 6-partito, laciniis oblongis, obtusis, alternis minoribus, ciliatis,* post anthesin *spiraliter tortis.* Stamina 6, *basi tubi inserta,* filamentis *brevibus, glabris,* antheris *conniventibus, rostratis, 2-locularibus, longitudinaliter dehiscentibus.* Ovarium *semisuperum, triloculare, ovulis circiter novem cuique loculo, placentæ carnosæ affixis, ascendentibus.* Stylus *subulatus.* Stigma *simplex.*

A native of the higher range of the Cordilleras, where it seems to be far from uncommon, appearing among the earliest of the vernal flowers with which the green-sward is adorned upon the first melting of the snow. Mr. M'Rae found it at Cumbre, one of the passes of the Andes, flowering in November 1825. The roots from which the

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* So called in consequence of the conical arrangement of the antheræ.

accompanying figure was taken were sent from Chile by Mr. Miers to Mr. Place, by whom they were presented to the Horticultural Society, in whose Garden our drawing was made in June 1827.

It is a hardy greenhouse plant, remaining in flower for several weeks, and remarkable for the intense bright blue of its nodding blossoms. It requires to be grown in light sandy loam, to be well watered when coming into flower, and after the blossoming is over to be kept dry.

Mr. Don has proposed to separate this plant from Conanthera, chiefly, as we understand him, because of the segments of its flower cohering into a campanulate tube, on which account it differs from Conanthera as Hyacinthus does from Scilla. But it appears to us, notwithstanding the truth of this statement, that in this particular case the characters depended upon by Mr. Don are overruled by other and far more important peculiarities common to both plants. There is, we presume, no doubt, although the seeds have not been examined, of this genus belonging to Asphodeleæ. We have, therefore, in a very natural group of plants, remarkable for the great uniformity of their structure, two species differing from all previously discovered in the very remarkable circumstances of their pedicels having no articulation, their ovarium being partly inferior, the alternate segments of the perianthium being fringed at the margin, and the anthers conniving into a cone. These very unusual characters seem to us to possess powers of combination which wholly overrule others of so secondary a nature as the greater or less cohesion of the segments of the perianthium, and to indicate a genus of plants too nearly allied in nature to be broken up by slight modifications of structure. Whether the Echeandia of Ortega is really distinct from Conanthera, is another question, which can only be determined by the inspection of authentic specimens; these we have not the good fortune to possess; and the figure and description in Link and Ottos' *Abbildungen neuer und seltener gewächse* do not enable us to settle the point.

A bulbous-rooted plant, a span high, and smooth. *Leaves* linear, acuminate, spreading, the length of the scape. *Scape* round, loosely panicled. *Bracteæ* subulate.

Flowers nodding, deep blue, without any articulation in their leaf-stalks. *Perianthium* campanulate, half superior, with a spreading, 6-parted limb: its segments oblong, obtuse, the alternate ones smaller and fringed, after flowering twisted spirally. *Stamens* 6, inserted into the base of the tube; *filaments* short, smooth; *anthers* converging, beaked, 2-celled, bursting lengthwise. *Ovarium* half superior, 3-celled, with about 9 ascending ovules in each cell, fixed to a fleshy placenta; *style* subulate; *stigma* simple.

J. L.

…cadilly Nov. 1. 1828.

CALANDRÍNIA* grandiflóra.

Large-flowered Calandrinia.

POLYANDRIA *MONOGYNIA.*

Nat. ord. PORTULACEÆ.

CALANDRINIA Kunth. — *Calyx* persistens, bipartitus, sepalis subrotundo-ovatis. *Petala* 3-5, hypogyna aut imo calyce inserta, libera aut imâ basi subconnata, æqualia. *Stamina* 4-15, toro v. basi petalorum inserta, libera, petalis sæpiùs alterna. *Stylus* 1, brevissimus, apice tripartitus, lobulis in stigma clavato-capitatum collectis. *Capsula* oblongo-elliptica, 1-locularis, 3-valvis, polysperma. *Semina* placentæ centrali funiculis capillaribus annexa. *Dec. prodr.* 3. 358.

C. *grandiflora;* caule suffruticoso, foliis carnosis rhomboideis acutis glaucis petiolatis, racemis terminalibus laxis indivisis, calycibus maculatis.

Caulis *suffruticosus, tortuosus, carnosus, 2-pedalis, erectus, glaucus.* Folia *sparsa, carnosa, glauca, rhomboidea, acuta, petiolata, avenia.* Racemi *terminales, longè pedunculati, pauciflori, secundi, floribus pendulis.* Bracteæ 2, *ovatæ, nigro lineatæ, serrulatæ, ad basin omnis pedicelli.* Sepala 2, *ovalia, concava, persistentia, glauca, purpurascentia, æstivatione imbricata, nigro lineata.* Petala 5, *ephemera, obcordata, plana, roseo-purpurea, hypogyna, post anthesin convoluta et persistentia.* Stamina 30-40, *inæqualia, hypogyna, et basibus petalorum adnata.* Ovarium *superum, uniloculare, placentâ liberâ, centrali, polyspermâ.* Stylus *cum ovario continuus;* stigma *capitatum.* Capsula *membranacea, petalis et sepalis obvoluta, unilocularis, placentâ columnari funiculis brevibus erectis supertectâ.* Semina *reniformia, fusca, à funiculis decidua.*

This beautiful succulent plant is a native of Chile, whence seeds were brought to the Horticultural Society by Mr. James M'Rae, in 1826. It forms a handsome bush, covered with fair glaucous leaves, and from the summit of its tortuous branches arise racemes of large bright rosy purple flowers, opening in succession for many weeks.

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* This genus has been named by M. Kunth after J. L. Calandrini, an Italian Botanist, who lived in the beginning of the eighteenth century.

Great care is required in its cultivation, not to give it too much water late in the summer, which proves fatal to it speedily. It should be kept in a greenhouse, in dry calcareous earth, during the winter; and in the summer it may be plunged in the open border in a warm sheltered situation. It is propagated by cuttings or by seeds, which latter are produced in small quantities.

We may here remark, that the Talinum ciliatum of the English Gardens is referred to Calandrinia by M. Decandolle, under the name of C. pilosiuscula; that Calandrinia compressa of Schrader, adopted as a distinct species by M. Decandolle, is probably the same; and that there is good reason to believe that all these are identical with the Talinum ciliatum of the Flora Peruviana, from which they are divided by M. Decandolle.

J. L.

HAMÉLIA* ventricósa.

The King-Wood Tree.

PENTANDRIA *MONOGYNIA.*

Nat. ord. Rubiaceæ.

HAMELIA Linn. — *Calyx* parvus, 5-fidus. *Corolla* tubulosa, oblonga, 5-gona, limbo 5-fido. *Stamina* 5, medio tubi inserta; *antheræ* oblongæ. *Stigma* obtusum, sub-5-gonum. *Bacca* ovata, sulcata, apice retusa et coronata, 5-locularis, polysperma, seminibus minutis.——Frutices; folia *plerumque* 3, *verticillata;* flores *corymboso-cymosi terminales. Juss. mem. mus.* 3. 398.

H. *ventricosa;* corymbis terminalibus axillaribusque, corollis campanulatis ventricosis, foliis lanceolatis glabris ternis quaternisve.

Nerio affinis arbor versicolore materie, lauri folio lucido, flore pentapetaloide sulphureo amplo. *Sloane jamaic.* 2. 63. *t.* 183. *f.* 2.

Campanula arborescens, foliis ovato-acuminatis verticillatim ternatis, stipulis acuminatis interpositis, capsulis quinquelocularibus. *Browne jamaic.* 166.

H. ventricosa. *Swartz prodr.* 46. *fl. ind. occ.* 1. 446. *Willd. sp. pl.* 1.981. *Ait. Kew. ed.* 2. 1. 375. *Bot. mag. Spreng. syst.* 1. 765.

H. grandiflora. *L'Héritier Sert. angl.* 4. *t.* 7. *Ait. Kew. ed.* 1. 1. 229. *Paradisus Londinensis*, 55.

Arbor, *ramis glabris, subtetragonis.* Folia *lanceolata, membranacea, petiolata, glaberrima, ternatim quaternatimve inserta, stipulis subulatis.* Corymbi *terminales, patentes, glabri.* Calyx *subrotundus, 5-dentatus.* Corolla *lutea, infundibularis, ventricosa, basi gibba, limbo erecto, plicato, 5-fido.* Antheræ *lineares, sæpiùs exsertæ.*

A handsome hot-house plant, growing vigorously, and flowering in abundance in nearly all the summer months. It is a native of Jamaica, where it becomes a large tree,

* This genus has been named in honour of Henry Louis Du*hamel* Dumonceau, a celebrated French philosopher of the last century, whose researches in vegetable physiology are the most perfect model of patient investigation and accurate deduction with which Botanists are acquainted.

yielding handsome variegated planks, called by the cabinet-makers Spanish elm or King-wood.

Our drawing was made in the Nursery of Mr. Lee, of Hammersmith, in July 1826.

Branches smooth, somewhat 4-cornered. *Leaves* lanceolate, membranous, stalked, quite smooth, inserted in threes or fours; *stipules* subulate. *Corymbs* terminal, spreading, smooth. *Calyx* roundish, 5-toothed. *Corolla* yellow, funnel-shaped, ventricose, gibbous at the base, with an erect, plaited, 5-cleft limb. *Anthers* linear, usually projecting.

J. L.

PÝRUS* spúria.

Hybrid Sorb.

ICOSANDRIA *DI-PENTAGYNIA.*

Nat. ord. POMACEÆ.
PYRUS. — *Suprà, vol.* 6. *fol.* 514.

§ *Sorbus;* folia pinnata v. pinnatifida.

P. *spuria;* foliis pinnatis 3-jugis subtùs hirsutis, foliolis ovatis crenatis: terminali majore, rachi supernè glanduliferâ. *Dec. prodr.* 1. 637.

P. hybrida. "*Mœnch weissents.* 90. *t.* 6." *Willd. arb.* 269. *Sp. pl.* 2. 1022: not of Smith.

Sorbus spuria. *Pers. ench.* 2. 39.

Mespilus sorbifolia. *Poir. suppl.* 4. *p.* 72; *but not Pyrus sorbifolia of* Watson's Dendrol. fol. 53.

Arbor *parvus, deciduus.* Folia *formâ quàm maximè diversa; crenato-serrulata, subtùs tomentosa, nunc simplicia, oblonga, nunc pinnatifida, laciniis oblongis, nunc pinnata, 2-3-juga, cum impare majore, foliolis oblongis.* Corymbi *terminales, multiflori.* Pedicelli calycesque *tomentosi.* Petala *Pyri arbutifolii.*

This handsome hardy shrub is but little known, and is rarely seen in Gardens. Its native country is doubtful; and it has been supposed to be the hybrid offspring of the Mountain Ash and the Arbutus-leaved Pear of North America. It is sometimes called Pyrus sorbifolia; but is by no means the plant figured by Mr. Watson under that name, which appears to be nothing more than Pyrus pinnatifida.

It flowers in June and July, and is succeeded by a very small quantity of berries. It will grow in any cold,

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* A Latin word, derived by De Theis from the Celtic *peren*, the name of the Pear-tree. Sorb is said by the same etymologist to be an alteration of the Celtic word *sor*, which signifies austere.

exposed situation, and is propagated freely by grafting or budding upon the stocks usually employed for the Apple-tree.

Our drawing was made in the Garden of the Horticultural Society, in May 1827.

A small *tree*, with deciduous leaves. *Leaves* very variable in form, between crenate and serrulate, downy beneath, sometimes simple and oblong, or pinnatifid with oblong segments, or pinnate with 2 or 3 pair of oblong leaflets, and an odd one, which is much larger than the rest. *Corymbs* terminal, many flowered. *Pedicels* and *calyxes* downy. *Petals* quite those of Pyrus arbutifolia.

J. L.

ÓPHRYS* araneífera; *var.* limbáta.

Bordered Spider Orchis.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDEÆ. § Ophrydeæ. *Lindley.*
OPHRYS. — *Suprà, vol. 3. fol. 205.*

O. *araneifera;* labello emarginato integro convexo pubescente inappendiculato subrotundo mutico: disco maculato, perianthio herbaceo: petalis ovatis pubescentibus sepalis duplò brevioribus, foliis glaucis.
O. araneifera *Auctorum.*
Var. *limbata;* maculâ disci sinuatâ limbatâ anticè bilobâ medio ocellatâ.

This pretty variety of O. araneifera was sent to the Horticultural Society, in 1826, by Signor Mauri, of Rome. It is figured chiefly for the purpose of shewing the differences that exist between it and Ophrys atrata, represented at Plate 1087. It is perhaps the same as Sir James Smith's O. fucifera; but of that species we have not seen any authentic specimens which will justify us in absolutely referring it hither. The Kentish O. araneifera varies so much in the figuring, and outline of its labellum, that we can scarcely doubt O. fucifera being a mere variety of it.

A hardy, perennial spring plant, when wild loving to grow in chalky soil among short grass; or, if cultivated, in a pot in a well-aired frame.

J. L.

* The form of the flowers of some of the plants formerly referred to Ophrys is said to have a resemblance to the eyebrow, ὀφρὺς in Greek. In what the resemblance consists, we confess our inability to discover; especially if the original Ophrys was, as is supposed, the plant now called Listera ovata.

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LUPÍNUS* littorális.

Shore Lupine.

DIADELPHIA *DECANDRIA.*

Nat. ord. LEGUMINOSÆ.
LUPINUS.—*Suprà, vol.* 13. *fol.* 1096.

L. *littoralis;* perennis, floribus verticillatis pedicellatis ebracteolatis, calycis labio utroque integro, foliolis 5-7, lineari-spatulatis utrinque sericeis, leguminibus 10-12-spermis transversim sulcatis, radicibus granulatis. *Douglas MSS.*

Radix *fibrosa, subfusiformis, tuberculis plurimis granulatis.* Caulis *decumbens, sericeus.* Foliola 5-7, *lineari-spatulata, utrinque sericea;* stipulis *subulatis, hirsutis.* Flores *verticillati;* pedicelli *hirsuti, calyce duplò longiores;* bracteæ *subulatæ;* bracteolæ *nullæ.* Calyx *bilabiatus, labiis æqualibus integerrimis.* Vexillum *ovatum, purpureum;* alæ *cæruleæ, acinaciformes, vexillo duplò longiores;* carina *pallida, acuta, ciliata.* Legumen *lineare, pilis rigidis brunneis vestitum;* semina *linearia, brunnea, nigro maculata.* Douglas MSS.

For the above description, and the following valuable account of this very interesting species, we are indebted to Mr. Douglas, who has kindly allowed them to be extracted from his unpublished account of the North-west American Flora.

"This species is abundant upon the sea-shore, from Cape Mendoçino to Puget's Sound, where it binds together the loose sand with its tough branching roots. It is used by the natives of the river Columbia as winter food; for this purpose it is prepared by drawing the roots through the fire until all their moisture is dissipated;

* Nothing is known of the meaning of this word. It was used by Pliny; and the commentators have fancied that it was derived from *lupus*, a wolf, *because it devours the ground!*

when they are tied up in small bundles, and will keep for several months. For eating, the roots are roasted in the embers, when they become farinaceous. The vernacular name of the plant is *Somūūchtan.* It is the liquorice spoken of by Lewis and Clarke,* and by the navigators who have visited the north-west coast of America."

"*Root* somewhat fusiform, with fleshy tubercles. *Stem* decumbent, silky. *Leaflets* 5-7, linear-spatulate, both sides covered with silky hairs; *stipulæ* subulate, their hairs longer than those of the leaves or stem. *Flowers* whorled; *pedicels* hirsute, double the length of the calyx. *Calyx* without bracteolæ, both lips entire, nearly of equal length. *Vexillum* ovate, purple; *alæ* hatchet-shaped, blue, double the length of the vexillum; *carina* pallid, ciliated, acute. *Pod* linear, covered with bristly brown hairs; *seeds* linear, brown, with black spots."

A hardy perennial, flowering from June to October, propagated by cuttings, division of the roots, and seed. Our drawing was made in the Garden of the Horticultural Society, in August 1828.

J. L.

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* The liquorice of this country does not differ from that common to the United States; it here delights in a deep loose sandy soil, and grows very large and abundantly. It is prepared by roasting in the embers, and pounding it slightly with a small stick, in order to separate the strong ligament in the centre of the root, which is then thrown away: the root is chewed and swallowed. — *Lewis and Clarke*, p. 452.

J. Ridgway. 169 Piccadilly Dec 1/20.

CANAVÁLIA* bonariénsis.

Buenos Ayres Canavalia.

MONADELPHIA *DECANDRIA.*

Nat. ord. LEGUMINOSÆ. § Phaseoleæ. *Dec.*

CANAVALIA Dec.—*Calyx* tubulosus, bilabiatus, labio inferiore dentibus tribus (vel unico) acutis parvis, superiore lobis 2 amplis rotundatis. *Corollæ vexillum* amplum bicallosum; callis parallelis; *alæ* stipitatæ oblongæ auriculatæ; carina dipetala. *Stamina* monadelpha, aut decimo subadherente. *Legumen* compressum, tricarinatum, nempè infrà et juxtà suturam superiorem nervo protuberante suturæ parallelo utrinque instructum, mucrone inflexo terminatum, membranis cellulosis inter semina donatum. *Semina* ovali-oblonga, hilo lineari.——Herbæ *aut* suffrutices, ramis *volubilibus*, foliis *pinnato-trifoliolatis*. Racemi *axillares multiflori pedicellis ternis*. Flores *ampli purpurascentes*. Dec. prodr. 2. 404.

C. *bonariensis;* foliolis ovatis obtusis cum acumine coriaceis glabris, racemis foliis longioribus, calycis labio inferiore unidentato.

Caulis *lignosus, sarmentosus, volubilis, teres.* Folia *ternata;* foliola *petiolulata, ovata, cum acumine obtuso, coriacea, integerrima, glaberrima.* Racemi *axillares, multiflori, penduli, glabri, apice leviter pubescentes.* Flores *gemini, ternive, è gibbis racheos, ad basin sub calyce bracteolis duabus minimis rotundis suffulti.* Calyx *viridis, campanulatus, bilabiatus, glaber, labio superiore maximo, foliaceo, bilobo, demùm reflexo, inferiore minimo, integerrimo, dentiformi.* Vexillum *magnum, obcordatum, purpureum, basi limbi callosum, pube quâdam intrà labia calli, abruptè refractum, et inde in ungue acuminatum;* alæ *falcatæ, obtusæ, vexillo breviores, purpurascentes;* carina *longitudine alarum, cymbiformis, obtusa, purpurascens, cornubus baseos brevibus, incurvis.* Stamina *monadelpha, declinata, nullo modo diadelpha;* antheris *oblongis, utrinque obtusis, alternis demissioribus.* Ovarium *stipite villoso longo insidens, falcatum, pubescens, heptaspermum, in* stylo *lineari, ascendente, glabro acuminatum;* stigma *glabrum, capitatum.* (Semen *magnum, Wisteriæ frutescentis, sec. cl. Herbertum.*)

This lovely climber is a native of Buenos Ayres, whence its seed was received by the Honourable and

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* Canavali is the name applied in Malabar to the species which constitutes the type of this genus.

Reverend William Herbert, to whom we are indebted for the specimens from which our drawing was made. We learn from Mr. Herbert that the stem is woody, and sends out frequently horizontal or drooping runners, which cross along to the furthest extremities of the hothouse, rising up here and there to the top of the building, and again hanging down from the wires upon the rafters.

A tender stove plant, flowering during most of the summer months. Our drawing was made in August last. Propagated, we presume, by cuttings.

The remarkably dilated upper lip of the calyx, the minute lower lip, and the monadelphous stamens, distinguish Canavalia satisfactorily from the other genera recently separated from Dolichos. The species now figured differs from the essential character ascribed to the genus by M. Decandolle, in the lower lip consisting of one minute tooth-like process, instead of three. We are not acquainted with the fruit; but we learn from Mr. Herbert that the seed was large, and very similar in size and colour to that of Wisteria frutescens.

J. L.

LOBÉLIA* longiflóra.

Long-flowered Lobelia.

SYNGENESIA *MONOGAMIA.*

Nat. ord. LOBELIACEÆ.
LOBELIA. — *Suprà, vol.* 1. *fol.* 60.

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§ *Lobeliæ herbaceæ, floribus axillaribus solitariis, corollis albis, tubo longissimo integro, limbo subregulari.* (Solenanthis). *Kunth synops.* 2. 344.
L. *longiflora;* herbacea, foliis obovato-lanceolatis grossè dentatis subtùs hirtellis, dentibus denticulatis, pedunculis axillaribus brevissimis, tubo corollæ longissimo, limbo æquali. *Kunth l. c.*
Trachelium Sonchi folio, flore albo longissimo. *Plumier ic.* 353. *f.* 1.
Rapunculus aquaticus foliis cichorii, flore albo, tubo longissimo. *Sloane jam.* 58. *t.* 101. *f.* 2.
Rapuntium longiflorum. *Mill. dict. no.* 7.
Lobelia longiflora. *Linn. Jacq. amer.* 219. *Swartz obs.* 317. *Willd. sp. pl.* 1. 942. *Jacq. hort. vind.* 1. *t.* 27.

One of the most venomous of all known plants. It is common in St. Domingo, Cuba, Jamaica, and Martinique, where it grows in damp places, and by the side of streams. In this country it is only cultivated in the stove, where it is a rarity. It is an annual, flowering in July and August, and seldom exceeds a foot in length.

In its native country it is said to prove fatal to horses which eat it, swelling them until they burst; whence the Spaniards call it *Rebenta cavallos.* Taken internally, it acts as a violent cathartic, the effects of which no remedy can assuage, and which ends in death. The juice of the

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* Named in honour of Matthew Lobel, physician to James the First of England. He was born at Lisle, in 1538; and died in London, in 1616. He was a celebrated Botanist in his time.

bruised leaves or stem applied to the eyes or lips excites a severe inflammation; as Jacquin tells us he found to his cost, having accidentally allowed some of the juice to remain upon his hands. The natives of St. Domingo know the plant well, under the name of *Quedec*.

For the opportunity of making the accompanying drawing, we are indebted to the liberality of his Grace the Duke of Northumberland, by whose permission it was communicated to us by Mr. Forrest, in August last, from the noble Collection at Syon House.

J. L.

DIGITÁLIS* laciniáta.

Cut-leaved Foxglove.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. SCROPHULARINEÆ.
DIGITALIS. — *Suprà, vol.* 1. *fol.* 48.

D. *laciniata;* foliis lanceolatis acuminatis laciniatis glabris, racemo subsecundo, corollis pubescentibus: laciniis ovatis barbatis, bracteis omnibus pedicellis multò brevioribus.

Caulis *herbaceus, erectus, ramosus, glaber.* Folia *laciniata, acuminata, glabra, superioribus apice et basi integerrimis.* Racemi *numerosi, subsecundi, glabri, foliis multò evectiores.* Bracteæ *ovatæ, pedicellis multò breviores.* Calyx *patens, corollâ multò brevior, sepalis ovatis.* Corolla *lutea, pubescens, infundibularis, tubo limbo multò longiore, labiis barbatis, superiore bifido, inferioris lobo medio ovato, acuto.* Stamina *tubi longitudine.*

Specimens of this new species of Foxglove were communicated to us by Messrs. Young, from their Nursery at Epsom, in July last. It had been raised from seeds collected upon the mountains about Malaga, by Mr. Philip Barker Webb. It is unquestionably a new species, differing from D. lutea, to which it is most nearly related, in its cut leaves, and short bracteæ.

A hardy perennial, increased by division of the roots, and flowering in June and July.

Stem erect, branched, smooth. *Leaves* jagged, acuminate, smooth, the uppermost entire at the point and base. *Racemes* numerous, somewhat one-sided, smooth, much

* So called from the fancied resemblance of the flower to a thimble, *digitabulum.* The Germans call the Foxglove *Fingerhut*, which is the same thing.

higher than the leaves. *Bracteæ* ovate, much shorter than the pedicels. *Calyx* spreading, far shorter than the corolla, with ovate sepals. *Corolla* yellow, downy, funnel-shaped; the tube considerably longer than the limb; the lips bearded, the upper bifid, the middle lobe of the lower one ovate, acute. *Stamens* the length of the tube.

J. L.

GESNÉRIA* macrostáchya.

Long-spiked Gesneria.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. GESNERIEÆ.
GESNERIA. — *Suprà, vol.* 4. *fol.* 329.

G. *macrostachya*; foliis oppositis cordato-ovatis crenatis rugosis incanis, corymbis terminalibus multifloris longè racemosis aphyllis.

Radix *tuberosus.* Caules *herbacei, annui, teretes,* 2 *pedes alti, tomentosi.* Folia *opposita, breviter petiolata, cordato-ovata, crenata, plana, rigida, incana.* Flores *corymbosi, in racemis multifloris, aphyllis, longis dispositi.* Bracteæ *breves, tomentosæ.* Calyx *ovatus, sericeus, quinquefidus, laciniis acutis, distantibus, æqualibus.* Corolla *tubulosa, tomentosa, cylindracea, basi gibba, limbo subregulari, 5-lobo, laciniis rotundatis, inferioribus maculatis.* Glandulæ *duæ, laciniis superioribus alternæ.*

This fine new Gesneria was sent to the Horticultural Society from Rio Janeiro, by Mr. Sellow, in 1825. Our drawing was made in the Chiswick Garden, in August 1826. It is a handsome tender stove herbaceous plant, flowering at all seasons of the year.

Root tuberous. *Stem* herbaceous, annual, taper, 2 feet high, downy. *Leaves* opposite, on short stalks, cordate-ovate, crenate, flat, rigid, hoary. *Flowers* corymbose, in many-flowered racemes, destitute of leaves. *Bracteæ* short, downy. *Calyx* ovate, silky, 5-parted, with acute, equal, distant segments. *Corolla* tubular, downy, cylindrical, gibbous at the base, with a nearly regular, 5-lobed limb, of which the segments are rounded, the lower being spotted. *Glands* 2, alternate with the upper segments.

J. L.

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* See fol. 1158.

Ridgway 169 Piccadilly Jan.

1203 *A* and *B*.

CONOCÉPHALUS* naucleiflórus.

Nauclea-flowered Conocephalus.

DIŒCIA *TETRANDRIA.*

Nat. ord. URTICEÆ. § *Artocarpeæ.*

CONOCEPHALUS Blume. — *Flores* diœci, capitato-spicati. *Calyx* tubulosus, (3-)4-fidus.—*Masc.*: *Stamina* (3,) 4; *filamentis* non exsertis, carnosis. *Rudimentum* pistilli. — *Fœm.*: *Ovarium* oblongo-cylindraceum, ovulo unico; *stylus* longus, indivisus. *Nuces* subbaccati, calyce excrescente tecti, congesti, compressiusculi. *Testa* subchartacea. *Embryo* exalbuminosus (v. subexalbuminosus), inversus. *Cotyledones* subfoliaceæ, plano-convexæ. *Radicula* brevis. *Blume Bijdrag. p.* 484, terminis paulò mutatis.

C. *naucleiflorus*; caule radicante scandente, foliis oblongis acutis scabris, capitulis masculis dichotomè paniculatis.

Urtica naucleiflora. *Roxb. fl. ind. MS.*

Caulis *lignosus, radicans, cortice scabro, super arbores scandens.* Folia *alterna, petiolata, cordata, integra, glabra,* 4-8 *uncias longa,* 3-6 *lata;* petiolis *teretibus, coloratis, dimidium foliorum æquantibus;* stipulis *ovato-oblongis, ferrugineis.* Masc.: Capituli *dichotomè paniculati, ex axillis foliorum adultorum, pisiformes, è floribus minutis odoratissimis constantes.* Bracteæ *ad dichotomias oppositæ, oblongæ, ferrugineæ.* Calyx *tubulosus, 4-fidus,* (*in nostris exemplaribus trifidus*), *laciniis cucullatis suprà antheras.* Stamina *tot quot laciniæ calycinæ, iisque opposita, plana, clavata;* antheræ *paululum exsertæ, cordatæ.* Rudimentum *ovarii capitatum, basi pubescens.* Fœm.: Capituli *ut in mare dichotomè paniculati axillares, è floribus parvis, purpureis, pedicellatis, odoratissimis constantes.* Calyx *tubulosus, 4-fidus, laciniis sæpè inæqualibus.* Ovarium *superum, oblongum, uniloculare, ovulo unico erecto;* stylus *brevis;* stigma *oblongum, laterale.* Nux *calyce baccato vestita, epicarpio carnoso, endocarpio cartilagineo.* Testa *membranacea.* Albumen *in seminibus recentibus tenue.* Embryo *inversus.* Cotyledones *oblongæ.* Radicula *supera, cylindracea.*—Roxb. MSS. quoad fœminam, et partem maris.

The accompanying drawing was made some years since, in the Hothouse of the Comte de Vandes; but no

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* From κῶνος, a cone, and κεφαλὴ, a head; in allusion to the form of the heads of flowers.

description having been taken of it at the time, its publication has been deferred. An opportunity of examining fresh flowers having subsequently been afforded from the same extensive collection, we have ascertained that it is the Urtica naucleiflora of Roxburgh.

It is one of the multitude of curious and beautiful plants for which our country is indebted to the splendid liberality of the Honourable Court of Directors of the East India Company; a liberality truly worthy of that princely body, which has been exercised in a manner absolutely unheard of in the annals of the most wealthy potentates, or of the most powerful governments; and which may be justly asserted to have conferred more real benefits upon science than the united efforts of all the sovereign princes of Europe. Under the patronage and protection of the East India Company, and by the indefatigable exertions of Dr. Wallich, the Flora of India has been explored to a degree which could never have been anticipated in the present generation; and the brilliant results of these researches have not been left to perish in a few private Gardens, or to moulder in the garrets of inaccessible and unarranged Museums. On the contrary, enormous distributions have been making for years; not only all England, but the Hothouses of the most remote Gardens of Europe have been supplied with the vegetable wealth of India; and the best part of the Flora of Nipal will soon be as well known in the flower-gardens of English cottagers as to the Nipalese themselves. Of dried plants, unheard of multitudes are destined by the Company for distribution, under the direction of Dr. Wallich, among the public and private collections both of England and of Europe. In short, the obligations imposed upon us by these acts of truly Oriental munificence are of such a nature, that it has become the bounden duty of all men who have the interests of science and of civilization at heart, to take every opportunity of expressing the deep sense which they cannot but feel of measures which so redound to the honour and glory of the Company.

For an opportunity of consulting the unpublished Flora of Roxburgh, we are indebted to the liberality of our friend Dr. Wallich. From the account of Urtica naucleiflora in

that work, much of what relates to the description of the male flowers of this plant, and all that is said of its female flowers, has been gleaned. From the same source we learn that it is "a large scandent, woody plant, common in the forests of *Chittagong*, *Silhet*, &c., and the eastern frontier of Bengal. In the former it is known by the vernacular name of *Dolea Lat;* and in the latter it is called *Lat Cadam* (*i. e.* scandent Nauclea). The flowers are beautiful and fragrant, and appear at various times throughout the year; but they ripen best about or before the beginning of the rains."

By the kind permission of Dr. Wallich, we subjoin an extract from Dr. Roxburgh's MS. Flora.

Stem stout, and woody, covered with dark-coloured, scabrous bark, the whole extending to a great length by climbing up and over trees, &c. *Leaves* alternate, petioled, cordate, entire, smooth, from 4 to 8 inches long, by from 3 to 6 broad. *Petioles* half the length of the leaves, round, coloured. *Stipules* axillary, solitary, large, ovate, oblong, smooth, of a dark ferruginous colour. — *Male. Panicles* from the old axillæ, composed of numerous small globular heads of minute, yellow, very fragrant flowers. *Bracteæ* in pairs, at the divisions of the panicle, oval and oblong, coloured like the stipulæ. *Perianthium* 4-leaved, leaflets oblong, concave, subcucullate over the anthers. *Filaments* very broad and short; *anthers* cordate. *Germ* none, but a columnar-headed gland in its place. — *Female* on a different plant. *Peduncles* from the axillæ of the former leaves, as in the male, generally solitary, once or twice dichotomous, with a large globular head of small, beautiful, purple, fragrant, pedicelled florets on each division. *Bracteæ* as in the male. *Perianthium* 1-leaved, 4-parted; *segments* often unequal. *Stamens* none. *Germ* superior, oblong, 1-celled, containing one ovulum, attached to the bottom of the cell; *style* short; *stigma* lateral, oblong. The succulent *calyx* covers a single oblong nut, which has an exterior succulent coat, and an interior thin hard one. The *testa* is membranous. *Albumen*, while the seed is recent, thin and succulent. *Embryo* inverted. *Cotyledons* 2, oblong. *Radicle* cylindrical, superior.

We should observe, that both Roxburgh and Dr. Blume

describe their plants as tetrandrous; those which we examined were certainly triandrous.

Plate *A* represents the lower part of the stem, and the flowers of the natural size. Plate *B* exhibits a diminished figure of the plant, together with dissections of the male flowers; of these the upper left figure is the head of flowers; that beneath it is a single floret torn open, shewing the position of the stamens and rudiment; the upper right figure is that of several male florets in their natural position; the lower on the same side are a stamen and the rudiment of the ovarium.

The brief description given by Dr. Blume of his Conocephalus suaveolens is not sufficient to distinguish that species from the present; it is probable, however, that it is a different plant.

J. L.

Pub by J Ridgway 169 Piccadilly June 1/29

S W. sc

HOSTA* cærúlea.

Blue-flowered Hosta.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. Verbenaceæ.

HOSTA Jacq. — *Calyx* obsoletè bilabiatus, 4-dentatus. *Corolla* subringens; laciniâ intermediâ labii inferioris amplâ, emarginatâ. *Drupa* nuce 4-loculari, 4-spermâ. *Pers. synops.* 2. 143.

Hosta cærulea. *Jacq. hort. Schönbr.* 1. *p.* 60. *t.* 114. *Link. enum.* 2. 127.
Hostana cærulea. *Pers. syn.* 2. 143.
Cornutia punctata. *Willd. sp. pl.* 3. 322. *enum.* 2. 654.
Cornutia pyramidata. *Linn. sp. pl.* 876. sec. *Ait. Kew. ed.* 2. 4. 45. non *Hort. Cliff* nec *Plumieri.*

Frutex *quadripedalis, ramis tetragonis.* Folia *opposita, petiolata, ovata, acuminata, basi attenuata, subdentata, glabriuscula.* Corymbi *axillares, foliis breviores, trichotomi.* Flores *cærulei, sub lente punctis albis glandulosis conspersi.* Drupa *globosa, nuce quadriloculari.* Willd.

A native of South America and the West Indies, whence it is recorded in the *Hortus Kewensis* to have been introduced before 1733, by Dr. Houstoun. Our drawing was made from a small plant in the collection at Syon, where it is found by Mr. Forrest to require a much more considerable degree of heat than is usual with stove plants.

Willdenow proposes to unite Hosta with Cornutia, because he thinks the fruit of the true Cornutia has been carelessly described by Plumier; and that it is in fact the same as that of Hosta. But surely the arguments of the skilful Botanist by whom this opinion is held, depend too much upon mere conjecture to deserve attention;

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* So called by Baron Jacquin, in compliment to his celebrated countryman Dr. Nicholas Thomas Host, a distinguished Botanist, and now chief physician at the court of Vienna.

besides which, we find the two genera separated by Persoon, and also by Professor Link.

A beautiful stove shrub, seldom growing more than 4 feet high. *Branches* four-cornered. *Leaves* opposite, stalked, ovate, acuminate, tapering to the base, somewhat toothed, smoothish. *Corymbs* axillary, shorter than the leaves, trichotomous. *Flowers* blue, with numerous white, glandular dots, only visible beneath a microscope. *Drupe* globose, with a four-celled nut.

J. L.

SALVIA* involucráta.

Broad-bracted Sage.

DIANDRIA *MONOGYNIA.*

Nat. ord. LABIATÆ.
SALVIA.—*Suprà, vol.* 4. *fol.* 347.

S. *involucrata;* glabra, foliis cordato-ovatis acuminatis serratis, verticillis sexfloris, bracteis magnis coloratis deciduis, corollâ ventricosâ glabrâ calycem longè superante. *Hooker in bot. mag. fol.* 2872.
S. involucrata. *Cav. ic.* 2. *p.* 3. *t.* 105. *Willd. sp. pl.* 1. 147. *Spreng. syst.* 1. 62.
S. lævigata. *Humboldt et Kunth nov. gen. et sp. pl.* 2. *p.* 238. *t.* 147. *Spreng. syst.* 1. 64.

Caulis *orgyalis et ultrà, quadrangularis, suffruticosa.* Folia *cordato-ovata, acuminata, serrata, glabra, venis purpurascentibus.* Flores *capitato-thyrsoidei, lætè purpurei, ternatim ex axillis bractearum ovatarum, magnarum, deciduarum, coloratarum, provenientes, pedicellati.* Calyx *coloratus, bilabiatus, labio superiore acuto integro, inferiore breviore bidentato.* Corolla *ventricosa, glabra, unciam et ultrà longa, galeâ pubescente, labio rotundato, trilobo.* Antheræ *parvæ, albæ, uniloculares, connectivo deorsùm longè producto, semisagittato.* Stylus *pubescens.*

This very handsome plant is a native of Mexico, whence it was lately introduced by Mr. George Ackermann, by whom its seeds were given to Mr. Tate. It is a most lovely border flower during the autumn months; and in the conservatory it is in blossom during the greater part of the summer. Propagated freely by cuttings, and requiring just the same treatment as Salvia splendens.

Our drawing was made in Mr. Tate's Nursery, in October last.

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* From *salvo*, to save or cure; in allusion to the reputed medicinal qualities of some species.

We entirely agree with our friend Dr. Hooker, in considering S. lævigata of Humboldt and Kunth identical with the S. involucrata of Cavanilles. We do not discover the slightest difference between those two supposed species.

Stem exceeding the human stature, 4-cornered, somewhat shrubby. *Leaves* cordate-ovate, acuminate, serrated, smooth, with purplish veins. *Flowers* in capitate thyrses, bright rich purple or lake colour, growing by threes out of the axillæ of large, ovate, deciduous, coloured bracteæ. *Calyx* coloured, 2-lipped; the upper lip acute, entire, the lower shorter, with two obscure teeth. *Corolla* inflated, smooth, an inch and more long, the helmet downy, the lip rounded, with 3 lobes. *Anthers* small, white, 1-celled, the connectivum elongated downwards into a sort of semisagittate straight process. *Style* pubescent.

J. L.

1204

MAXILLÁRIA* ciliáta.

Fringed-lipped Maxillaria.

GYNANDRIA *MONANDRIA.*

Nat. ord. Orchideæ. § Vandeæ *Lindley.*
MAXILLARIA. — *Suprà, vol.* 11. *fol.* 897.

M. *ciliata;* pseudo-bulbis ovatis ancipitibus, foliis lanceolatis 3-pluricostatis, scapo unifloro, labio abbreviato fimbriato.
Dendrobium ciliatum. *Swartz. Pers. syn.* 2. 523.
Maxillaria ciliata. *Flor. peruv. syst. p.* 221.

Caules *bulbiformes, ovati, sub-ancipites, diphylli.* Folia *lanceolata, 3-pluricostata, acuminata.* Scapi *radicales, uniflori, flexuosi, vaginati, pseudo-bulbis paulò longiores.* Flores *magni, herbacei.* Sepala *ovato-lanceolata, subæqualia; inferiora cum processu elongato columnæ connata;* petala *conformia, minora.* Labellum *cum columnâ articulatum, disco lobi medii fimbriati cristâ latâ sulcatâ abruptè terminato.* Columna *marginata, clavata.* Pollinia 4, *per retinaculum glandulæ affixa.*

A native of woods in South America, flowering in the autumn. It is among the most curious of the Maxillaria tribe, and is readily distinguished by its short, fringed lip. With us it is a tender epiphyte, requiring the heat of a good stove.

Our drawing was made in Mr. Lee's Nursery, in May 1828.

The *stems* are short, ovate, compressed, and bulb-like, each bearing two lanceolate, plaited, sharp-pointed *leaves,* which have from three to a greater number of ribs. The *scapes* arise from the root, each bearing one flower, flexuose, sheathed with convolute, obtuse scales, a little longer than the bulb-like stems. *Flowers* large, green.

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* From the *maxillæ* or jaws of an insect, to which some resemblance has been found in the column and lip of the genus.

Sepals ovate-lanceolate, nearly equal, the lower connate with the elongated process of the column; *petals* of the same shape, but smaller. *Lip* articulated with the column, the disc of the middle lobe, which is fringed, terminated abruptly by a broad, furrowed crest. *Column* bordered, clavate. *Pollen masses* 4, attached to the gland by a common stalk.

The bulbs, as they are improperly but commonly called, of this tribe of Orchideæ, are in fact stems in a particular state: Botanists have as yet given no definite name to them, wherefore we propose hereafter to distinguish them by the denomination of *pseudo-bulbi*.

J. L.

PÝRUS* angustifólia.

The Evergreen Crab.

ICOSANDRIA *DI-PENTAGYNIA.*

Nat. ord. POMACEÆ.
PYRUS. — *Suprà, vol.* 6. *fol.* 514.

P. *angustifolia;* foliis lanceolato-oblongis basi acutis leviter crenato-dentatis nitidis, pedunculis corymbosis. *Willd. sp. pl.* 2. 1020. *Pursh fl. am. sept.* 1. 340. *Smith in Rees, no.* 17. *Watson dendrol. brit. t.* 132.
P. coronaria. *Wangenh. am.* 61. *t.* 21. *f.* 47.
P. pumila *of some nurseries.*

This handsome hardy shrub is not often found in cultivation, and yet it deserves to be known much more than many of greater note. In sheltered situations, or in mild winters, it is nearly evergreen, especially if its shoots are not over vigorous. In the low woods of Carolina, which are its birth-place, it forms a small tree, resembling Pyrus coronaria.

Perfectly hardy, and propagated by grafting upon the common Crabstock.

According to the *Hortus Kewensis,* it was introduced in 1750, by Mr. Christopher Gray. Our drawing was made in the Garden of the Horticultural Society, in May 1828.

The fruit is said to be a small green turbinate pome, not bigger than a haw.

A small tree or large bush, growing from 8 to 10 feet

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* See fol. 1196.

high, with lead-coloured speckled branches. *Leaves* oblong, smooth, deep green, either serrated or somewhat pinnatifid; the midrib and petiole pubescent. *Flowers* pink and white, with spatulate, distant petals. *Calyx* with a smooth tube and cottony segments. *Styles* 5, woolly at the base.

J. L.

1208.

PÆÓNIA* hýbrida.

Hybrid Pæony.

POLYANDRIA *TRI-PENTAGYNÌA.*

Nat. ord. RANUNCULACEÆ.
PÆONIA.—Suprà, vol. 1. *fol.* 42.

P. *hybrida;* herbacea, folliculis recurvatis pubescentibus, foliis multipartitis: laciniis linearibus acuminatis glabris, flore cernuo foliis longiore.
P. hybrida. *Pall. fl. ross.* 2. *p.* 94. *t.* 86. *Willd. sp. pl.* 2. 1223. *Ait. Kew. ed.* 2. 3. 316. *Smith in Rees, in loco, no.* 10. *Decand. syst.* 1. 393; *prodr.* 1. 66. *Bieb. fl. taur. cauc.* 2. 11. *et* 3. 367.

This is the most beautiful of the cut-leaved Pæonies, from all which it differs strikingly in the deeper red of its flowers. At the time of publishing the Monograph of Pæonia in the *Transactions of the Linnæan Society,* no other knowledge was possessed of this than was to be gathered from the figure and account given of it by Pallas in his *Flora Rossica;* and from these imperfect materials it was referred to P. tenuifolia, as a mere variety.

Within a few years roots have been obtained by the Horticultural Society from several quarters, and the study of them in a growing state has now made it evident that it is a genuine species. At least, we have Mr. Sabine's

* So named by the ancients in memory of Pæon, the physician whom Homer records as having cured Pluto with this herb, when he was wounded by Hercules. We presume its virtues are altogether reserved for such august occasions, they having never been made manifest on any other, as far as we know. The παιονια of Dioscorides evidently appears, by his very particular description, to be our plant. What he distinguishes by the gratuitous appellation of male and female, are now acknowledged to be two species, though Linnæus considers them as varieties of one, by the name of P. officinalis.—*Smith in Rees' Cycl.*

authority to say that such is his opinion; and this, in the genus Pæony, must have great weight.

From the observations of the same gentleman, we learn that the characters which can be certainly depended upon in distinguishing P. hybrida from P. tenuifolia, are, firstly, the nodding flower of the former, as contrasted with the erect flower of the latter; secondly, the greater length of the peduncle, by which the flower of P. hybrida is elevated distinctly above the leaves, while that of P. tenuifolia is always overtopped by them; and, lastly, in the greater breadth of the leaves of P. hybrida. From P. anomala it is readily separated by its downy, not smooth, fruit.

Pallas states, that he first observed this in the Petersburgh Garden, coming up among P. tenuifolia and P. anomala, whence he inferred that it was hybrid between those two species. He, however, subsequently found it wild in Tauria; and there now appears in the opinion of Russian Botanists to be no ground for the notion of its hybrid origin. It is said, upon the authority of Dr. Fischer, to be wild about the Volga.

According to Marschall von Bieberstein, it is native of grassy places in the promontory of the Caucasus, especially about Stauropolis; but it is very rare in Tauria. The same writer adds, that it propagates itself without variation from seeds; and that P. laciniata of Willdenow, cited to P. tenuifolia by M. Decandolle, is the same as P. hybrida.

Our drawing was made in May 1828, in the Garden of the Horticultural Society.

J. L.

HEDYCHIUM* coccíneum.

Scarlet Garland Flower.

MONANDRIA *MONOGYNIA.*

Nat. ord. SCITAMINEÆ.
HEDYCHIUM. *Suprà, vol.* 2. *fol.* 157.

H. *coccineum;* spicâ elongatâ oblongâ glaucescente, fasciculis subtrifloris patentibus, limbi interioris laciniis cultriformibus, labello subrotundo bilobo plicato: lobis acutiusculis ungue brevi gracili, stamine concolore labello duplò longiore, foliis ensiformibus bifariis à basi attenuatis subtùs glaucis: costâ pilosâ. *Wallich MSS.*
H. coccineum. *Hamilton in Rees, no.* 5. *Bot. cab.* 8. *t.* 705. *Cat. of bot. gard. calc. ed.* 2. *ined.*
H. longifolium. *Roscoe's scit. mon. opt. sec. cel. Wallich.*
H. angustifolium. *Ejusdem sec. Wallich.*

Caules *erecti, graciliores quàm in speciebus quibusdam aliis, quadripedales, juxta latera vaginarum glaucescentes.* Folia *subbifaria, erecto-patentia, è basi parùm rotundata, bipedalia, ciliata, sensim attenuata in acumen tenuissimum filiforme, subtùs glauca, costâ pilosâ.* Ligula *brevis, truncata, retusa, nunc biloba.* Spica 10-*pollicaris-pedalis, rachi irregulariter triangulari, villis longis laxè adpressis solubilibus copiosis vestita.* Fasciculi *sparsi, patentes, biflori, rariùs triflori.* Flores *saturatè coccinei, ferè inodori.* Bracteæ *exteriores oblongæ, vix acutæ, ciliatæ, leviter glaucescentes,* 14 *lineas longæ, tubo corollæ ter breviores.* Calyx *villosulus, ore bidentato.* Limbi *corollæ* exterioris laciniæ *contortæ, tubo parùm breviores,* interioris *breviores, semilanceolatæ, margine antico gibboso, basi attenuatæ.* Labellum *rhomboideo-subrotundum, basi rotundatâ infundibuliformi complicatum, ad medium bifidum; lobi parùm divergentes, acutiusculi, ovati; unguis limbo dimidio brevior, canaliculatus.* Filamentum *labello duplò longius, arcuato-divaricatum,* antheraque *oblonga, coccinea.* Ovarium *villosum.* Stigma *ab apice antheræ sæpiùs parùm solutum.* Wallich MSS.

For the opportunity of making a drawing of this species of Hedychium, we are obliged to Mr. Hatfield, of the

* From ἡδυς, sweet, and χιων, snow; alluding to the fragrance and whiteness of the flowers of the original species.

Alpha Cottages, by whom it had been obtained from the Botanic Garden of Liverpool. It is one of the many plants brought to our Gardens from India by the liberality of the Honourable Court of Directors of the East India Company.

To the kindness of our much-valued friend Dr. Wallich we are indebted for the excellent description we have given above, and for all the remarks we have to offer upon it. He observes, that "It is widely different from all the other species by the deep red colour of its flowers, and perfectly spear-shaped leaves. In p. 82 of the first volume of Roxburgh's *Flora Indica*, I mentioned that it was a distinct species from H. angustifolium, which has been well represented in the *Botanical Register*, vol. 2, p. 157, and in the *Botanical Magazine*, vol. 46, 2078. H. coccineum of Loddiges's *Botanical Cabinet* gives a good representation of the plant as to leaves, but the colour of its flowers differs."

The synonyms of Mr. Roscoe have been also kindly furnished by Dr. Wallich: we unfortunately possess no ready means of access to the former distinguished Botanist's splendid Monograph.

J. L.

CALATHÉA* grandifólia.

Large-leaved Calathea.

MONANDRIA *MONOGYNIA.*

Nat. ord. CANNEÆ.
CALATHEA.—Suprà, vol. 11. *fol.* 932.

C. *longifolia;* petiolis longis cylindraceis basi vaginantibus, foliis oblongis apiculatis subundulatis lucidis glabris concoloribus, capitulis oblongis, bracteis undulatis obtusis floribus brevioribus, labello cuneato apiculato.

Acaulis. Folia *disticha, 3-pedalia, horizontaliter patentia, oblonga, apiculata, lucida, glaberrima, paululùm undulata, petiolis breviora; petioli glabri, basi vaginantes, collo cylindraceo, lucido, arcuato.* Capitulum *terminale, oblongum;* bracteæ *obtusæ, undulatæ, laxæ, floribus breviores.* Calyx *laciniis ovalibus, membranaceis.* Corolla *lutea, tubo calyce duplò longiore, arcuato, limbo exteriore 3-partito, laciniis patentibus, oblongis.* Labellum *anticum, cuneatum, apiculatum.* Stamina 3, *quorum duo sterilia; horum alterum planum, petaloideum, labello oppositum, alterum ad latus labelli, cucullatum ad stigma retinendum; fertile ad latus labelli, bilobum, lobo antico sterili depauperato, postico antherifero.* Ovarium *triloculare; ovula solitaria.*

This fine new species was introduced to the Horticultural Society's Garden from Rio Janeiro, in 1826, by Sir Henry Chamberlaine, along with a large collection of other rare plants. It flowered for the first time in a stove in the year 1827, and has since continued to flourish in great beauty: but it does not increase at the root; so that it is likely to remain a rare plant, unless imported direct from the Brazils.

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* So named by Dr. Meyer; derived, no doubt, from the Greek word κάλαθος: but whether in the sense of *cup,* in allusion to the cup-like stigma; or of a *basket,* in allusion to the dried leaves being used in basket-work, we do not know.

It grows readily in rich decayed vegetable earth; and is probably native of woods near Rio Janeiro, whence we have a wild specimen.

We had hoped ere this to have acquired the materials necessary to explain the generic differences between Calathea and Phrynium: we have not, however, yet been fortunate enough to procure sufficiently perfect flowers of the latter to satisfy ourselves as to their true structure. We are, therefore, still obliged to defer a complete character of Calathea.

But if we understand rightly Roxburgh's account of Phrynium capitatum, it must be sufficiently distinct in having an inner limb of *five* pieces, two of which it is to be presumed belong to the series represented in Calathea by the labellum, and three to that of the stamens. It would also seem that its filament is simple, while that of Calathea is divided into two unequal lobes, of which the posterior is that which bears the anther.

The following is an enumeration of the plants which are probably referable to this genus: —

1. Calathea zebrina. *Lindley.*
   Syn. *Maranta zebrina.* Suprà, vol. 5. fol. 385.
2. Calathea flavescens. *Lindley.* Suprà, vol. 11. fol. 932.
3. Calathea violacea. *Lindley.* Suprà, vol. 12. fol. 961.
4. Calathea longibracteata. *Lindley.* Suprà, vol. 12. fol. 1020.
5. Calathea grandifolia. *Hujus loci.*
6. Calathea macilenta. *Lindley.*
   C. petiolis marginatis vaginantibus, foliis oblongo-lanceolatis concoloribus glabris, capitulis ovatis subcernuis compressis, bracteis subrotundis planis floribus brevioribus, labello et stamine petaloideo opposito subæqualibus.
   Native of Rio Janeiro. Garden of the Horticultural Society. Flowers white.
7. Calathea discolor. *Meyer.*
   Syn. *Maranta Casupo.* Jacq.
8. Calathea Casupito. *Römer et Schultes.*
   Syn. *Maranta Casupito.* Jacq.
9. Calathea lutea. *Römer et Schultes.*
   Syn. *Maranta lutea.* Lam.

?10. Calathea juncea. *Römer et Schultes.*
   Syn. *Maranta juncea.* Lam.
   Maranta Arouma. Aubl.
   Maranta petiolata. Rudge.

11. Calathea capitata. *Lindley.*
   Syn. *Maranta capitata.* Fl. Peruv.

12. Calathea lateralis. *Lindley.*
    Syn. *Maranta lateralis.* Fl. Peruv.
13. Calathea comosa. *Lindley.*
    Syn. *Maranta comosa.* Linn.
14. Calathea Allouia. *Lindley.*
    Syn. *Maranta Allouia.* Aubl.
15. Calathea Cachibou. *Lindley.*
    Syn. *Maranta Cachibou.* Jacq.
    Maranta lutea. Aubl.
16. Calathea ovata. *Lindley.*
    Syn. *Phrynium ovatum.* N. et M.
17. Calathea dubia. *Lindley.*
    Syn. *Maranta dubia.* N. et M.

Besides the above, there are two or three other Brazilian plants in our Gardens which have not yet flowered, but which are probably new species of Calathea.

Stemless. *Leaves* distichous, 3 feet long, spreading horizontally, oblong, apiculate, lucid, quite smooth, a little undulated, shorter than the petioles. *Petioles* smooth, sheathing at the base, with a shining, cylindrical, curved neck. *Head* of flowers terminal, oblong; *bracteæ* obtuse, undulated, loose, shorter than the flowers. *Calyx* with ovate, membranous segments. *Corolla* yellow, twice the length of the calyx; the tube curved; the outer limb 3-parted, with spreading, oblong segments. *Labellum* anterior, wedge-shaped, with a small point. *Stamens* 3, of which two are sterile; of these one is flat and petaloid, and placed opposite the labellum, the other is stationed on one side of the labellum, and has a hooded end for the purpose of keeping down the stigma; the fertile stamen is on the other side of the labellum, and is 2-lobed, one lobe being sterile and starved, the other perfect and having the anther.

J. L.

CHELÓNE* nemorósa.

Grove Chelone.

DIDYNAMIA *GYMNOSPERMIA.*

Nat. ord. Scrophularineæ.
CHELONE.—*Suprà, vol. 2. fol.* 175.

C. *nemorosa*: foliis ovatis acuminatis serratis; superioribus amplexicaulibus cordatis, pedunculis nudis trifloris pubescentibus.
C. nemorosa. *Douglas ined.*
Caulis *ramosus, pedalis, sub-erectus, glaber.* Folia *glabra, serrata, acuminata, subpetiolata, superioribus cordatis, amplexicaulibus.* Pedunculi *axillares, triflori, foliis breviores, pubescentes, bracteis subulatis.* Sepala *subulata, subæqualia.* Corolla *ventricosa, roseo-purpurea, subpubescens, labio superiore bifido, transverso; inferiore trilobo, plano, laciniis retusis, palato plicato.* Antheræ *lanuginosæ.* Semina *marginata.*

A native of mountain woods, near springs and rivulets, in the north-west of North America, where it was discovered by Mr. Douglas flowering from July to September. It was raised from seeds in the Garden of the Horticultural Society in 1827, and flowered in July and August 1828, at which season our drawing was made.

There is no genus to which this plant can be referred with more propriety than to Chelone; but it is by no means a genuine species of that genus. In habit it is intermediate between Pentstemon and Chelone, and its structure is not exactly that of either.

The soil which suits the species is a rich vegetable mould, among other plants: it is most advantageously

* Derived from χελώνη, the Greek name of the Tortoise, from some fancied resemblance between the back of the flower and the back of that animal.

grown among American shrubs, in an east or west border. Exposure to too much sun is hurtful to it.

The following is Mr. Douglas's description:—

Stem decumbent, smooth. *Leaves* nearly sessile, ovate, acuminate, serrate, strongly nerved. *Peduncle* axillary, pubescent. *Segments* of the *calyx* nearly equal, linear, acute. *Corolla* ringent, slightly hairy on the outside, the lower lip plaited. *Anthers* white, lanuginous. *Seeds* conspicuously winged.

J. L.

KÆMPFÉRIA* Roscoeána.

Mr. Roscoe's Kæmpferia.

MONANDRIA *MONOGYNIA.*

Nat. ord. SCITAMINEÆ.
KÆMPFERIA.—Suprà, vol. 2. fol. 173.

K. *Roscoeana;* tuberibus fasciculatis subsessilibus oblongis; caule nullo; foliis terræ decumbentibus suborbiculatis acutis suprà variegatis; floribus paucis radicalibus fasciculatis erectis sessilibus; limbo exteriore breviore, interiore plano patentissimo, laciniis obovatis obtusis, anticâ profundè bilobâ. *Wallich MSS.*

Radix *constans tuberibus numerosis, oblongis, sesquipollicaribus, ferè sessilibus, pallidis, intùs aqueo-albidis, inodoris, et insipidis.* Caulis *nullus nisi petioli foliorum brevissimi, dilatati, invicem imbricantes.* Folia *bina, opposita, evolutione cylindraceo-convoluta et erecta, mox verò plana, patentissima, terræque arctè depressa, latissimè ovata, ferè orbiculata, acuta, parùm undulata, membranaceo-marginulata, firma, subcarnosa, opaca,* 5-6-*pollicaria, suprà ex amœnè viridi et purpureo fasciatim variegata, propter punctula minuta mollia innumera ferè velutina, subtùs pallida, costâ latâ, basin versùs prominente, nervisque pluribus gracilibus ad apicem convergentibus; basi rotundata, vel obsoletè retusa.* Flores *inter bases foliorum radicales, erecti, pauci, sessiles, candidi, inodori, magni.* Bracteæ *duæ, lineari-lanceolatæ, hyalinæ, unguiculares, basi tubi calycique adpressæ.* Calyx *brevis, subcylindricus, obliquè acutus, tenuissimus, glaber.* Tubus *cylindricus, sesquipollicaris.* Limbus *planus, patentissimus, diametro ferè bipollicari.* Laciniæ *tres* exteriores *lineares, acutæ, unguiculares, subæquales;* interiores *obovatæ, obtusæ, pollicares; antica major profundè biloba, lobis rotundatis, basi versùs faucem leviter convexa et flavicans.* Filamenta *perquam brevia, summo tubo anticè inserta, gerentia antheram oblongam, subcristatam, obtusam, canaliculatam, inclusam, loculis marginalibus gracilibus; polline albido.* Stigma *cuneatum, pubescens, antherâ brevius.* Wallich MSS.

"When I found this elegant and singular species it was out of flower, but in perfect foliage. On my return to

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* Named in honour of Engelbert Kæmpfer, a learned German, who travelled in the East in the end of the seventeenth century, and who was the first to publish any important information upon Japan.

the Botanic Garden in Calcutta, a few roots which I had brought with me produced fresh leaves at the commencement of the rainy season of 1827; and in July the plant bore a succession of flowers. The leaves are extremely beautiful, being marked on their upper surface with dark-green and purple belts or spots, not very unlike the leaves of Maranta zebrina: in form and decumbent posture they resemble those of Kæmpferia Galanga.

"Besides this species, I have brought three others with me from the Burma countries to Bengal, namely, one from the Teak forests, on the Attran river, in Martaban (*K. candida* Wall.), and two from Pegu and Martaban (*K. Crawfurdiana* and *K. parviflora* Wall.). I have dedicated the species described above, and also a superb Curcuma, with large igneous spikes, which I found in Pegu and the Tenasserim coast, to my highly revered friend William Roscoe, Esq. of Liverpool, whose splendid Monography of the beautiful but most difficult tribe to which both those plants belong, reflects new lustre upon a name already immortalised in the annals of literature and philanthropy."

For the whole of the preceding very important information, we have to express our acknowledgments to the liberality of Dr. Wallich. This, and another article in the present Number, will serve to convey some idea of the minute attention which has been given to every part of Indian Botany by our distinguished friend, and of what may be expected from the splendid works, to the publication of which he is now devoting himself.

Our drawing was made in October last, in the Garden of the Horticultural Society, from plants brought home by Dr. Wallich; but as the flowers did not expand perfectly, the figure has been completed, by that gentleman's permission, from an Indian drawing in his possession. It is a tender and rather delicate stove plant, native of damp shady rocks, upon the mountain Taong Dong, near Ava, where it was found, in November 1826, at the elevation of about a thousand feet.

J. L.

PHOLIDÓTA* imbricáta.

Imbricated Pholidota.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDEÆ. § *Malaxideæ.* Lindley.

PHOLIDOTA Lindley. — *Pollinia* 4, cereacea, libera, glandulâ nullâ. *Anthera* terminalis, decidua, bilocularis, 4-valvis! *Stigma* cuneatum, in processu saliente columnæ insertum. *Columna* brevis, utrinque alata, carnosa. *Labellum* saccatum, cucullatum, tridentatum. *Petala* linearia, erecta. *Sepala* conniventia, concava, duobus inferioribus carinatis.—— Spicæ *imbricatæ terminales.* Folia *coriacea in pseudo-bulbis solitaria.*

P. *imbricata;* pseudo-bulbis sulcatis ovatis obtusis fasciculatis, foliis oblongis coriaceis plicatis, racemis distichis pendulis imbricatis.

P. imbricata. *Lindley in Hooker's exotic Flora, fol.* 138.
Cymbidium imbricatum. *Roxb. MSS. Hort. Beng. p.* 63.
Ornithidium imbricatum. *Wallich MSS.*
Ptilocnema bracteatum. *Don prodr. fl. Nep.* 33.
Wellia-Theka-Maravara, vel Mau-Maravara. *Rheede Malab.* XII. 47. *t.* 24.

Planta *perennis, omnibus partibus lævis, latè suprà arbores serpens, frequentissimè dependens, nunc nutans.* Caules *consistunt bulbis fasciculatis, numerosis, carnosis, bipollicaribus, oblongo-cylindricis, v. subovatis, obtusis, obsoletè angulatis, unifoliis, indutis bracteis aliquot magnis, inæqualibus, lanceolatis, emarcescentibus.* Folium *è vertice bulbi petiolatum, coriaceum, crassum, valdè rigidum, lanceolatum, utrinque attenuatum, acutum, sulcato-plicatum, pedale ad sesquipedale, quinquenervium, suprà atro-viride, nitidum, subtùs opacum, costâ robustâ valdè elevatâ.* Petiolus *crassus, firmus, suprà canaliculatus, bi-tri-pollicaris.* Racemus *solitarius, laxus, pedunculatus, è sinu folii nutans v. pendulus, lineari-oblongus, complanatus, distichus, folii apicem plerumque attingens.* Pedunculus *gracillimus, lignosus, filiformis, nudus, exceptis bracteis racemi infimis vacuis, vaginantibus, imbricatis.* Rachis *compressiuscula, leviter flexuosa.* Flores *numerosi, utrinque circiter* 40, *inter minores, exactissimè bifarii, alterni, approximatè patentes, pallidè flavicantes, inodori, pedicellis brevibus, clavatis.* Bracteæ *infrà singulum florem solitariæ, magnæ, ferè unguiculares, patentissimæ, latè ovatæ, denticulatæ, concavæ, scariosæ,*

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* Derived from φολὶς, a scale, and οὖς ὠτὸς, an ear; in allusion to the scaly ear-like bracteæ of the spike.

antè anthesin in spicam subcylindricam imbricatæ, persistentes, infimæ paucæ abortivæ. Perianthium *ringens, bilabiatum, pentaphyllum, membranaceum;* foliola *distincta;* exteriorum *alterum ovatum, acutum, fornicatum, cum interioribus falcatis occultis in galeam posticam connivens, altera parùm majora, dissimilia, prismatico-scaphoidea, marginibus interioribus parallelis, dorso gibboso-carinata, labello supposita, cumque illo labium inferius efficientia.* Labellum *sessile, cucullato-ventricosum, subinclusum, basi semicirculari columnæ haud productæ accretum, ore truncatum, fundo intùs cristulis duabus elevatis;* lamina *brevissimè unguiculata, recurvata, biloba, lobis semicordatis, obtusis, crenulatis.* Columna *medio carnosa (elevata), lateribus apiceque marginata membranulâ latiusculâ, scutiformis.* Anthera *terminalis, rotundata, subdidyma, rufescens, apici columnæ adnata, bilocularis, loculis prominulis bivalvibus, valvulis inferioribus minoribus.* Massæ pollinis *ovatæ, cereaceæ, posticè sulculo notatæ, in singulo loculo geminatæ, pedicellis propriis apice convexis.* Stigma *ad apicem columnæ, horizontale, vertice valvatum, demùm clausum.* Wallich MSS.

The preceding elaborate and most excellent description, made from plants observed in India, has been kindly communicated to us by our valued friend Dr. Wallich, by whom an account of this and a second species was long ago prepared for publication. At that time he proposed to refer them to Ornithidium, remarking, however, at the same time, that certain peculiarities of structure, which had not escaped his accurate observation, "would perhaps require the plant to be formed into a new genus."

This measure we had ourselves adopted, so long since as 1824, and having communicated the name now retained to Dr. Hooker, the species was published in the *Exotic Flora,* in January 1825; but at that time no knowledge was possessed in this country of Dr. Wallich's MS. name. The genus Ornithidium, to which Pholidota is undoubtedly very nearly allied, is distinguished by its labellum being partially connate with the column, by the column being taper, not round, by the anther having only two valves, and by its pollen masses being fixed upon a gland. In this last point the figure in the *Exotic Flora* of Ornithidium coccineum, otherwise excellent, is defective, the pollen masses being there represented as lying loose in the cells of the anther; and, therefore, as having the structure of Malaxideæ, instead of that of Vandeæ.

A native of several parts of India. Dr. Wallich informs us, that he has found it on the mountains west of Ava, also high up the rivers in Martaban, and on the

mountains upon the Tenasserim coast; and that he does not find it differ in any respect from the species as found in Nipal, where it is exceedingly common, as well as in Sylhet and Chittagong, growing parasitically upon trees in mountain forests.

Our drawing was made last November, in the Garden of the Horticultural Society, to which establishment it had been presented by the Honourable Court of Directors of the East India Company, along with a great quantity of other most rare and valuable plants personally brought to England in the summer of 1828 by Dr. Wallich.

It is a stove plant, requiring the same treatment as other similar epiphytes, but by no means difficult to cultivate. At the same time with this, the other species of Pholidota above alluded to (*undulata* Wall.) was brought home; and is thus, it is to be hoped, secured to our Gardens: it is a much more delicate plant.

Upon the subject of its cultivation, Dr. Wallich remarked in the paper from which the foregoing extracts have been made, that, " Like most members of this lovely tribe, it is easily made to grow on the trunks of old trees, taking care to place some vegetable mould under its roots, and tying it so as to retain its situation. It requires constant humectation, which is easily effected by means of a small vessel suspended over it, with a perforated bottom, through which the water is led down upon the plant by means of a string, the upper end of which fills, though it does not quite shut up, the aperture of the vessel. It is propagated by separating its bulbous stems, which generally form dense tufts, ornamented with evergreen, dark-coloured, shining leaves, of a peculiarly firm and leathery texture."

J. L.

1214

CALCEOLÁRIA* floribúnda.

Many-flowered Lady's Slipper.

DIANDRIA *MONOGYNIA.*

Nat. ord. Scrophularineæ.
CALCEOLARIA.—Suprà, vol. 9. *fol.* 723.

C. *floribunda;* hirtello-viscosa, foliis ovatis basi attenuatis amplexicaulibus dentatis pubescentibus, superioribus cordatis sessilibus, racemis patentissimis pendulisve bifidis multifloris, sepalis ovatis, floribus geminis.
C. floribunda. *Humb. Bonpl. et Kunth nov. gen. et sp. pl.* 2. 309. *Römer et Schultes syst. veg.* 7. 160. *Spreng. syst.* 1. 46.
C. paniculata. *Herb. Willd. sec. R. et S.*
C. connata. *Bot. mag.* 2876.

Planta 3-*pedalis, erecta, ramosa, in hortis herbacea, subannua, verosimiliter in solo natali suffrutescens.* Caulis *erectus, teres, glanduloso-hirsutus, viscosus, percurrens (axin occupans), undè ramos quosdam, paucos verò, emittit.* Folia *lætè viridia, glanduloso-pubescentia, subrugosa, utrinque concolora, dentata, acuta, inferiora ovata in petiolum attenuata, amplexicaulia, superiora sessilia, altè cordata, demùm in bracteis cordatis integerrimis mutata.* Racemi *glanduloso-pilosi, glutinosi, axillares, longè pedunculati, patentissimi, vel penduli, multiflori, bifidi, foliis duplò v. triplò longiores, mox in paniculam copiosam ad fastigium evanescentes.* Flores *subsecundi, geminati.* Calyx *pedicello duplò brevior, sepalis subrotundo-ovatis.* Corolla *flava, labiis conniventibus.*

A fine hardy species, newly introduced from Chile. It forms an upright, branching plant, covered with a profusion of drooping racemes of delicate, pale-yellow blossoms, during all the autumn. In its own country it appears to be suffrutescent; but with us it is better treated as an annual, turned into the open border in May, and left in the autumn to perish with others of similar habits. It will

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* So called from *calceolus*, a slipper; in allusion to the figure of the corolla.

in favourable seasons produce a few seeds, with which the stock may be perpetuated; or it may be increased by dividing the roots.

The accompanying figure, which represents a portion of the upper part of the stem, with one of the racemes, was taken in August 1828, in the Garden of the Horticultural Society, where it had been raised from seeds received from Chile in 1827.

Our native specimens are from Valparaiso: they accord perfectly with the plants of the Gardens, except in being rather woody at the base. Baron Humboldt found it near Quito.

J. L.

1215.

S. W. del.

CALCEOLÁRIA* ascéndens.

Dwarf Shrubby Lady's Slipper.

DIANDRIA *MONOGYNIA.*

Nat. ord. SCROPHULARINEÆ.
CALCEOLARIA. — *Suprà, vol.* 9. *fol.* 723.

C. *ascendens;* caule suffruticoso ascendente, foliis ovatis petiolatis rugosis denticulatis pubescentibus; inferioribus basi acutis, caule glabro piloso, umbellis paucifloris subramosis longè pedunculatis.

Caulis *suffruticosus, ascendens, pedalis v. sesquipedalis, vix ramosus, glaber, pilosus.* Folia *utrinque pubescentia, rugosa, denticulata, nullo modo glutinosa, superiora subsessilia.* Flores *aurantiaci, in paniculis umbellæformibus, v. potiùs umbellis subpaniculatis, paucifloris, longè pedunculatis dispositi.* Sepala *subrotunda, tomentosa.*

The plant now represented belongs to a tribe of Calceolarias, the species of which are extremely difficult to distinguish from each other. It is very different from any in our Gardens, and we believe also from any that have been described from dried specimens. In character it most nearly approaches *C. integrifolia;* but it is distinct from that.

Cultivated in the open border, in which it succeeds perfectly during the summer; it does not grow more than a foot, or at the utmost a foot and half high, forming a neat tuft, remarkable for its deep red stems and bright deep yellow flowers.

Our drawing was made in August last, in the Garden of the Horticultural Society, where it had been raised, in 1826, from seeds collected by Mr. James M'Rae upon clayey banks in the Cordilleras.

J. L.

* See fol. 1214.

M. Hart del. Pub by J. Ridgway 169 Piccadilly Feb 1.1829. G. Watts sc

LUPÍNUS* ornátus.

Sky-blue Perennial Lupine.

DIADELPHIA *DECANDRIA.*

Nat. ord. LEGUMINOSÆ.
LUPINUS.—Suprà, vol. 13. *fol.* 1096.

L. *ornatus;* perennis, floribus verticillatis appendiculatis, calycis labio superiore bifido: inferiore integro elongato, foliolis 7-12 lineari-lanceolatis undique argenteis sericeis, leguminibus 4-5-spermis. *Douglas ined.*

Perennis. Radix *fibrosa.* Caulis $1\frac{1}{2}$-$2\frac{1}{2}$-*pedalis, lignosus.* Folia *digitata;* foliolis 7-13, *lineari-lanceolatis, utrinque sericeis, argenteis.* Racemi *terminales, pedales.* Flores *verticillati.* Calyx *villosus, labiis æqualibus.* Bracteæ *subulatæ.* Bracteolæ *lineares, minutæ, deciduæ.* Alæ *oblongæ, cæruleæ.* Vexillum *latum, ovatum, ad latera reflexum, medio pallidius.* Carina *falcata, apice ciliata, quàm vexillum v. alæ minùs intensè colorata.* Legumen *oblongum, 4-5-spermum.* Semina *parva, alba, lævigata.* Douglas.

Found by Mr. Douglas abundantly in mountain valleys, on the banks of the Spokan River, near Kettle Falls, on the river Columbia; and also near the chain of lakes of the last-mentioned stream, in gravelly or light dry soils. It was observed in flower from June to August; and Mr. Douglas remarks that it is one of the finest of the tribe. In this we quite agree. Nothing can surpass the lovely azure blue of the flowers, or the silvery surface of the leaves.

A hardy perennial, flowering from May till the end of November; and in fact yielding to nothing but severe frost. Our drawing was made in the Garden of the Horticultural Society, in which it had been raised from Mr. Douglas's seeds, in 1827.

* See fol. 1198.

Root fibrous. *Stem* 18 inches to 2½ feet high, of a woody texture. *Leaves* digitate; *leaflets* 7-13, linear-lanceolate, on both sides densely covered with a shining silkiness. *Racemes* terminal, a foot long. *Flowers* whorled. *Calyx* nearly villous, the upper and lower lips equal; *bractea* subulate; *bracteolæ* linear, minute, deciduous. *Alæ* oblong, blue. *Vexillum* broadly ovate, reflected at the sides, paler in the centre. *Carina* falcate, ciliate at the apex, paler than the vexillum or alæ. *Legumen* oblong, 4-5-seeded. *Seeds* small, white, and polished.

We are obliged to Mr. Douglas for the above description.

J. L.

NOTE upon *Canavalia bonariensis*, fol. 1199.

We are informed by Mr. Herbert, that this plant is a very hardy greenhouse climber, and that probably, if raised from cuttings and planted out, it will succeed in the open border during the summer. It continues in flower from June till the end of November, in the greenhouse.

END OF VOLUME XIV.

LONDON:
J. MOYES, TOOK'S COURT, CHANCERY LANE.

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